

ABSTRACT OF CAPSTONE

Bradford R. Stephens

The Graduate School

Morehead State University

March 25, 2019

REFOCUSING EDUCATOR PERSPECTIVES WHEN TEACHING  
STUDENTS OF POVERTY

---

Abstract of Capstone

---

A capstone submitted in partial fulfillment of the  
Requirements for the degree of Doctor of Education in the  
College of Education  
At Morehead State University

By

Bradford R. Stephens

Jacksonville, Arkansas

Committee Chair: Shane C. Shope, Assistant Professor

Morehead, Kentucky

March 25, 2019

Copyright © Bradford R. Stephens, March 25, 2019

## ABSTRACT OF CAPSTONE

REFOCUSING EDUCATOR PERSPECTIVES WHEN TEACHING  
STUDENTS OF POVERTY

Poverty is a prevalent issue within the global educational system. Research supports the facts that students of poverty have a higher high school dropout rate, attend and graduate from college at a lower level, and have lower lifetime earnings as compared to their upper socioeconomic peers. Today's educational workforce is not representative of this diverse group of students. While most teacher licensure programs attempt to educate on this group of students, the results are fortuitous. Statistical improvement concerning the overall success of students of poverty appears lackluster at best.

This capstone has created a professional learning course to educate instructional, administrative, and support personnel on poverty. Beginning with an examination of the classification poverty through the cognitive differences experienced by children of poverty, the participant gains a better understanding of where their students of low socioeconomic background come from and a myriad of experience and difficulties they face daily.

The final portion of the professional learning involves different methodologies and concepts that can be integrated into the classroom environment through appropriate planning and consideration when dealing with students of poverty. An educator is most effective when they consider the background of these students. Everyday tasks such as scaffolding in the classroom to the recognition of the

additional daily stressors that these students face outside of their educational environment allow the educators to adapt their classroom environment to provide educational equity to these students.

KEYWORDS: Poverty, equity, perspectives, low socioeconomic status, cognitive

---

Candidate Signature

---

Date

REFOCUSING EDUCATOR PERSPECTIVES WHEN TEACHING  
STUDENTS OF POVERTY

By

Bradford R. Stephens

Approved by

---

Kevin K. Durand, EdD	
Committee Member	Date

---

Michael W. Kessinger, EdD	
Committee Member	Date

---

Shane C. Shope, EdD	
Committee Chair	Date

---

Timothy L. Simpson, PhD	
Department Chair	Date

## RULES FOR THE USE OF CAPSTONES

Unpublished capstones submitted for the Doctor's degree and deposited in the Morehead State University Library are as a rule open for inspection, but are to be used only with due regard to the rights of the authors. Bibliographical references may be noted, but quotations or summaries of parts may be published only with the permission of the author, and with the usual scholarly acknowledgements.

Extensive copying or publication of the capstone in whole or in part also requires the consent of the Dean of the Graduate School of Morehead State University.

A library that borrows this dissertation for use by its patrons is expected to secure the signature of each user.

Name

Date[illegible]

CAPSTONE

Bradford R. Stephens

The Graduate School

Morehead State University

March 25, 2019





REFOCUSING EDUCATOR PERSPECTIVES WHEN TEACHING  
STUDENTS OF POVERTY

---

Capstone

---

A capstone submitted in partial fulfillment of the  
Requirements for the degree of Doctor of Education in the  
College of Education  
At Morehead State University

By

Bradford R. Stephens

Jacksonville, Arkansas

Committee Chair: Shane C. Shope, Assistant Professor

Morehead, Kentucky

March 25, 2019

Copyright © Bradford R. Stephens, March 25, 2019

ProQuest Number: 13864803

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 13864803

Published by ProQuest LLC (2019). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code  
Microform Edition © ProQuest LLC.

ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 – 1346

## DEDICATION

This capstone is dedicated to those students who are left behind due to no fault of their own. Children who are born into poverty or end up growing up in poverty because of circumstances outside of their control. It is for the parents, grandparents, aunts, uncles, siblings, and other guardians who want more for their children but do not know how to go about it because they were children of poverty or find themselves in poverty and do not know how to get out. It is for the teachers, administrators, paraprofessionals, and every other educational support personnel who wants to make a difference in the lives of the children that education can matter most. The individuals who recognize that something is different with children of poverty but are unable to comprehend why or what it is exactly. To those that can make an insurmountable difference in the future of these children by taking a little extra time to think and act with their decisions. It is dedicated to anyone who wishes to make a difference for the better in the life of a poor child.

## ACKNOWLEDGMENTS

I find it only appropriate to start by thanking my amazing wife, Julie. She served as my educational mentor, helping me get my foothold into education as well as locating my first purely educational position, as much of a learning experience as it was. She is undoubtedly an expert in the field as well after having read and critiqued nearly every paper I have written since entering graduate school. You will always be my mentor. I know that one day I too will be able to say that I am married to a doctor. Thank you.

A family is more than those that surround us while we are growing up. A family is those that we surround ourselves with once we are adults. They laugh at our mistakes to keep us humble, and they give us a shoulder to rest upon when we are weary and an ear to listen to when times are rough. David and Joan, having you in my life once again is amazing. I only regret it wasn't sooner. Margaret, Daniel, and Megan, you have accepted me into your family, and I do not have words to describe the thanks that I have. You have helped me become what I am today. Sarah and Russ, I will teach your child someday. To all the others who have made a difference in my life, I call you family because you know that you are. It is not a declaration made lightly.

To my BOD cohorts, you have pushed me, stressed me, corrected me, and endured me. Thank you for all the support and laughter during our three years together. I know you will all achieve your goals and make the world of education

better because of what you have accomplished. We are now part of an elite group. Do not let that allow you to think better of yourself. We all began at the bottom and worked our way up. Be prepared to help those that come after us so that we all can indeed become what we desire.

To the Morehead State University Doctoral Program staff, you are amazing. The program would not be as successful as it is without you doing all that you do. You push the students to become more than they ever could believe. For the sake of our future, keep up what you are doing through the molding of the educational leaders of tomorrow.

# TABLE OF CONTENTS

	Page
List of Figures .....	14
Executive Summary .....	15
What is the core of the capstone? .....	15
Who is the capstone meant to impact? .....	20
Why were this capstone and related strategies selected? .....	24
Defining poverty .....	25
Types of poverty .....	29
Student cognitive attributes.....	32
Teacher attributes.....	34
Professional learning.....	39
Limitations of the study .....	42
Limitations of the capstone .....	44
Reflections .....	46
Capstone Project .....	48
Module 1 .....	49
Module 2 .....	50
Module 3 .....	51
Executive Summary Reference List.....	53
Appendices.....	76
Appendix A: Module 1 .....	77

Appendix B: Module 2.....	105
Appendix C: Module 3.....	133
Capstone Reference List .....	161
Vita.....	172

**List of Figures**

Figure 1: The Five Dimensions of Poverty .....	27
Figure 2: Half Face at Least One Disadvantage .....	28
Figure 3: Unemployment Rates and Earnings by Educational Attainment .....	37



### **Executive Summary**

#### **What is the core of the capstone?**

My father had a well-paying union job at a local factory until he injured on the job. Only having a high school education and not being able to continue working in the factory, he changed professions, resulting in a substantial decrease in income for a family of six. The eventual stress resulted in my parents divorcing with my father moving out and my mother, who also only had a high school diploma, being left to raise four children between the ages of three and ten. Though she eventually went back and earned an Associate's degree, this meant that she was not able to work. Instead, she attended classes full time at a college an hour away and raise a family. Food stamps, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Goodwill, and Family Dollar quickly became a way of life.

Stained clothes did not mean that they were dirty, though that is difficult to explain to someone making fun of you. Even in a rural community, name brand items carried prestige. I remember having been nominated for the homecoming court in grade school, with other students knowing full well that I would not be able to raise funds or have the clothes to dress up for the event. I remember having a food basket furnished at Thanksgiving one year so that my immediate family would have food, our name pulled from a local county agency because we received assistance. The basket delivered by my high school peers, appearing without notice to a house that was in complete disarray. I remember forgetting my coat one evening in January while visiting another school but not telling anyone, including my mother, because I

knew we could not afford another coat and I did not want to be view as one of “those” students.

I graduated near the top of my class having taken every computer science and concurrent college preparatory course our school offered. I was a National Honor Society officer, an Eagle Scout, and nearly aced the mathematics portion of the SAT, but did not have a single teacher inquire or push me to go to college. I left for the United States Army three days after graduating from high school. Entering the field of education as a teacher nearly two decades later, I have found that little has changed concerning the expectations of our most impoverished students. The lowering of expectations combined with a failure to recognize the implications of what living in poverty means to a student is the primary drive behind the selection of my capstone topic.

Poverty knows no ethnicity, race, gender, color, or creed. Children can be born into poverty or find themselves in it due to an event outside of their control. They suddenly are part of a family structure that no longer has the availability to provide self-support and basic needs that are available to their peers. Goals and necessity change, as do opportunities and, all too often, expectations from others. Children suddenly become fixtures in the back of the room, not able to participate in extracurricular events, provide supplies to complete projects, and begin to pay less attention as their focus is no longer on learning but living.

As their personal life outside of the classroom begins to crumble, so does their education in the school. What may have once been some of the shining moments for a

child, such as an ‘A’ on an assignment or Honor Roll on their report card, now becomes a thing of the past. The child may begin to believe that they are not capable of learning. What once had happened seamlessly now becomes a struggle. All these factors compound together to degrade the self-esteem of the child slowly. Their emotional stability, directly related to hormonal levels within the brain, becomes a roller coaster of extreme highs and lows as the body attempts to self-regulate for a scenario that the child is not able to completely comprehend. The attention and concerns of a child’s home life shift. The educational support and development of the child(ren) give way to meeting the needs of the family as a whole.

Children who once were active members of the classroom find themselves now on the outside looking in. The cycle perpetuates, growing from year to year until the student either drop out of school or is pushed through with a diploma that is not representative of his or her actual educational attainment. If education is the great equalizer, then poverty is one of its greatest adversaries, fighting a battle to drag everyone associated with it down into the pits of despair.

A student’s attitudes and behaviors reflect their cognitive conditioning and understanding. How a student thinks, reacts, reasons, retains information and maintains attention all revolve around a student's cognitive abilities. Outside factors play an instrumental part on the chemical and hormones that the body releases (Alexander, 2011; AEDC, 2015; Echouffo-Tcheugui et al., 2018; Mala, 2016; McGaugh & Roozendaal, 2017; Quas, Castro, Bryce, & Granger, 2018). Many outside factors are not within the control of the educational system, such as guardian

educational level, family income, or household resources. School districts are accountable for those factors that occur within the classroom and school building, and this is where education can offset the effects of poverty. Through proper training and education, teachers can develop the attitudes and skills necessary to increase student expectations. Additionally, teachers can provide students with the skills, knowledge, and ability to deal with adversity in the classroom while strengthening their academic understanding. This knowledge and personal gratification of success, in turn, results in higher self-expectations of the student and the comprehension that they can achieve their own elevated goals.

The primary goal of this capstone was to refocus educator perspectives and attitudes concerning children of poverty. Through a refocusing of these outlooks, an educator finds themselves in a stronger position to make decisions and actions that will benefit this unique section of the students that they serve. By facilitating an educational environment that is conducive for learning for these specific students, the opportunity is created for optimal student growth, both educationally and personally. This growth, in turn, will significantly heighten the future opportunism available to these students towards becoming productive members of society.

One of the methods of achieving this goal is through the empower of educators with tools to mitigate the effects of poverty in the classroom. Through spending just an extra moment considering students of poverty, they can help to offer every student a chance to work towards his or her maximum capability. Through professional learning, educators are provided professional development opportunities

that prepare them to deal with the physiological, societal, and personal challenges associated with the inequitable treatment of low socioeconomic students in the classroom. The professional learning is an effort for the educational staff to reach their highest level of self-actualization. Self-actualization, as defined in the Random House Unabridged Dictionary (n.d.) is, “the achievement of one’s full potential through . . . grasp of the real world.” When examined through the work of Maslow’s Hierarchy of Needs, an individual can see that self-actualization is considered the pinnacle as they begin to meet their own need of self-fulfillment (Maslow, 1943). As one meets their own basic physical and psychological requirements, they are then able to intrinsically move forward in achieving their own needs and realization of their personal, full potential through self-actualization (McLeod, 2018). Through the individual’s aspiration and education provided in this professional learning, teachers become aware of unintentional biases (Banks & Tucker, 1998, Moule, 2009; Schulz & Fane, 2015), lowered expectations (OECD, 2018; Szpara, 2006; Woodson & Harris, 2018), and an unrecognized harm that they unwillingly play in perpetuating the cycle and damage that poverty has on our children.

Diversity in the modern classroom encompasses much more than the physical differences we perceive between students. Dr. James A. Banks (1993, 2008, 2015, 2017) has referenced that diversity includes racial, ethnic, cultural, linguistic, and religious beliefs and background. Most of these are visible to the casual observer. Diversity runs deeper as it is not readily apparent or identifiable from the outside. Social stratification plays a part in virtually every aspect of a student’s education.

The extant research supports the idea that an emerging correlation between a student's socioeconomic status (SES) and academic achievement (Cedeño, Martinez-Aris, & Bueno, 2016; Colgren & Sappington, 2015; Galen, 2007). Through the integration of distinctive pedagogical approaches, attitudinal modifications, and increased expectation, student behavioral and academic transformation can happen. Greater success in high school leads towards a higher success rate in college, which in turn leads to better job opportunities in society (French, Homer, Popovici, & Robins, 2014; Geiser & Santelices, 2007; Hiss & Franks, 2014). The socioeconomic background that a student comes from does not necessarily dictate that their future is considered preordained, but the extant research does suggest that this socioeconomic status does influence a student's success in school.

Research also supports the idea that teacher interaction can have a mitigating influence with low SES student populations (Kennedy, 2010; McKnight, 2015; Westphal et al., 2016). Through professional learning and education, instructional staff can gain awareness of this specific type of diversity and of ways to help attempt to break the cycle of poverty.

### **Who is the capstone meant to impact?**

The students of today will become the employees, parents, and citizens of tomorrow. Expectantly, these students will become contributing members of society who will propel future economies or governments onward. They may become parents who will look at an educational system that once served them. In the broader scope of events, this capstone attempted to serve society through addressing the targeted

population of low SES that are increasing in the U.S. population as the gap widens between those who “have” and those who “have not.” One way to address this topic is to improve the way educators gain a set of alternatives lens to view the student’s learning.

All individuals perceive the world in their fashion. These frames, as described by Bolman and Deal (2017), come with a variety of concepts and values that will create an individualized lens through which an individual view the world. No two lenses are the same as everyone has their background and experiences. Fortunately, these lenses can change over time based on experiences and education. By reframing these lenses, educators can become more effective when dealing with students of poverty.

Educators are functioning at the highest level when they can distinguish their background and present-day conditions with that of their students. This situation is especially true when those educators understand the impact of poverty on student brain function in the classroom. This capstone project intended to provide information necessary to address the unique educational needs of low SES students.

Unfortunately, the concepts and actions to mitigating some of the effects of poverty on students are overlooked, not considered by educators, or are not used to their maximum capacity. In the best-case scenario, low SES students suffer a mild disadvantage than their higher SES peers. In the worst-case scenarios, ignorance of this population coupled with a failure to recognize their specific needs and situations

can have a devastating effect on their education, and as a result, potentially their future.

This capstone attempts to clarify a lens through which educators would view students in poverty. With an informed perspective of these cognitive effects on school-age children, which has a direct impact on their emotional behavior, comprehension of the overall picture can begin to take place and changes made within the educational environment. These changes can be accomplished through researched-based methods of interacting and engaging such students.

Research-based training is necessary for everyone in the educational environment including building administrators, support staff, teachers, district administration, and school board members — the building administrators who set the tone and attitude within their campuses and providing guidance to other shareholders. Often overlooked is the support staff for the valuable assistance that they contribute to all members of the building, filling in the unrecognized gaps. The capstone was for the teachers who are the lifeblood of a school and whose daily interactions create the expectations of performance within the classroom, the linchpin for student success. The capstone intended to assist the district administration who must be willing to look at the big picture and think creatively for ways to bridge the gap between the low SES students that have traditionally fallen behind those with an affluent or middle-class background concerning standardized test scores or graduation rates. Additionally, the school board members who are representatives of their communities, may, absent training and unbeknownst to themselves, be authorizing policies that are



counterproductive to the very students that need their assistance the most (Boccanfuso & Kuhfeld, 2011; Fischer, 2015; Hanover Research Council, 2010; McLaughlin, 2016).

The capstone, though targeted specifically at classroom educators, attempted to educate and inform the groups mentioned above concerning the primary focus of the low SES student population through professional learning. Students of poverty may or not realize that something is wrong but often do not have anyone to advocate for them. They do not think like their middle to higher SES peers and often do not know why. These students understand that their teachers may claim that they know the difference of what it means to be poor but do not act accordingly to this statement. These children continuously hear that their education will make the difference between success and failure in the future but, for them, the future is now as they cannot seem to compete with those who go home to a warm bed, a hot meal, or a family support structure that can assist them with their education (Egalite, 2016; Jeynes, 2017, McNeal, 2015). These lives are whom this capstone was meant to impact the most by educating educators about how these students are different, why they are different, and ways to mitigate the effects of these differences in the educational environment. We are discussing their lives, their education, and their future.

**Why were this capstone and related strategies selected?**

Estimations in 2016 are that nearly one in every five children lives in poverty (USDE – NCES, 2018). Poverty can strike a family at any time in a variety of fashions. For many families, this is a stark reality as the median savings account for individuals age 35-44 in 2016 was only \$5,000 (Smith, 2018). For those under the age of 35, the median amount falls to \$1,580 (Smith, 2018). A medical emergency, loss of employment, or family restructuring, such as a divorce, can all lead a family towards financial mishap.

Personally, this is what happened to my family while growing up. Mine is one where a singular event began a downward spiral resulting in myself and my sibling growing up in poverty; an educational experience where a lack of intervention and lowered standards would persist throughout our high school educations. This failure of the educational system has supported the ensuing result of generational poverty for some of my siblings and setting a course that would eventually lead me here.

Poverty itself has many different forms, some that are easier to alleviate and others that require systematic approaches over time to mitigate. No unique approach will eliminate poverty, but processes can be implemented to create the possibility for these instances to be minimized.

The examination of extant literature concerning the differentiation of low SES students in the educational environment reveals students' cognitive abilities, teachers' attributes, and professional learning as the primary areas at issue. Each of these three areas plays an integral part in moving to a solution. Through an investigation of each

of these, a picture starts to come into perspective as to why these misconceptions exist.

**Defining poverty.** The United States government calculates the numerical figures use to classify poverty. The two primary statistics derived are the poverty threshold and the poverty guideline. Each of these serves a purpose within their different agencies. The Bureau of the Census currently issues the poverty threshold for purely statistical purposes (U.S. Department of Health & Human Services, 2019). These figures are for estimating the number of individuals living in poverty for classification purposes. Determination of eligibility for assistance of some Federal services is determined by the poverty guidelines issued by the Department of Health and Human Services (Fisher, 1992). While these figures are typically close, they are not identical.

The Census Bureau sets the annual poverty threshold based upon a system initially devised in 1964 by Mollie Orshansky of the U.S. Social Security Office (Fisher, 2008). Though the system has been revised and periodically updated, the premise remains the same; family monetary income, excluding any capital gains or noncash benefits, as compared to three times the cost of the economy food plan, as determined by the Department of Agriculture, annually adjusted for the changes in the Consumer Price Index (CPI). This national figure does not differentiate for geographical locations (U.S. Department of Commerce, 2018a), which allows for a wide discrepancy when comparing a singular value to a national scale.

Per the Bureau of Economic Analysis, the poorest county in the United States, based on the 2017 personal per capita income, is Issaquena, Mississippi at \$11,937, while the greatest is Teton, Wyoming at \$233,860 (U.S. Department of Commerce, 2018b). The median is Lincoln County in Kansas at \$40,481 (U.S. Department of Commerce, 2018b). While an annual income of \$40,481 may suffice to meet the standard needs of a family in Benzie County, Michigan, the same income would far exceed the requirements in Wheeler, Georgia but fall extremely short in Teton, Wyoming. Available resources commonly dictate the associated cost of living. Since available resources are not the same across the United States, the cost of living will fluctuate accordingly. Thus, classifying students as being in poverty solely on their families' income is not accurate.

The Department of Health and Human Services also uses CPI as the standard to measure poverty levels. Except for Alaska and Hawaii, the poverty guidelines are a standard measure for the contiguous United States. The remaining 48 states still use a singular figure for calculation of program eligibility.

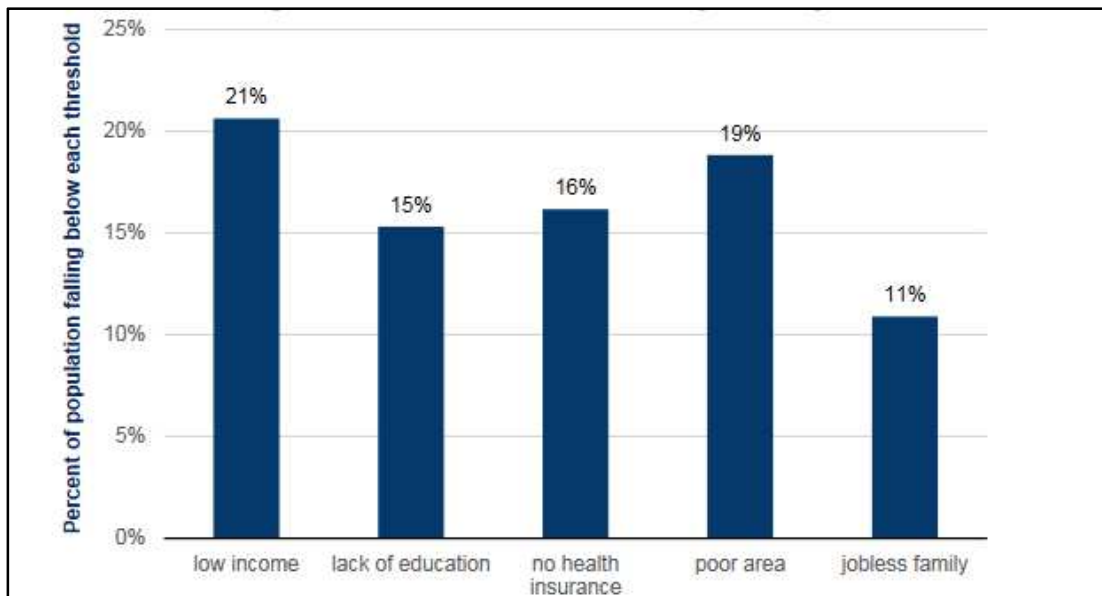
I would not explicitly say that the cost of living is directly tied to geography, but state that it does play an influential part in it. As resources and services, such as Supplemental Nutrition Assistance Program (SNAP), Earned Income Tax Credit (EITC), WIC, Medicaid, Red Cross, Feeding America, or Habitat for Humanity to name a few, become more difficult to obtain or are not financially judicious for the government or the private service sector, their importance and increases when dealing with poverty (Chaudry & Wimer, 2016; Murry, Berkel, Gaylord-Harden, Copeland-

Linder, & Nation, 2011; Saxena, Thornicroft, Knapp, & Whiteford, 2007). Rural areas, which have a lower population density, see a reduced number of these resources as the cost per person for assistance is not viewed as being justified. This leads to the sustainment of poverty.

Urban poor find themselves with a more significant number of available resources, but the institutions and programs are forced to operate with a higher number of eligible applicants. These problems can be further exacerbated as a family begins to earn income, only to find that they are no longer eligible for the assistance upon which they have become reliant. It becomes a vicious cycle that if you earn too much money, you lose your benefits and if you do not work enough, you are ridiculed for being lazy. Often, this aspect of government support is lost in the middle and upper classes. Their view is interpreted by biases that see those in poverty as lazy and worthless.

An additional consideration is the concept of multidimensional poverty. In *Five Evils: Multidimensional Poverty and Race in America*, Reeves, Rodrique, and Kneebone (2016) of the Brookings Institute revisit the Beveridge report of 1942 titled *Social Insurance and Allied Services*, a workshop geared towards preparing Great Britain to deal with the expected mass poverty as a result of World War II. Possessing one single dimension of poverty does not necessarily relegate a family into the categorical classification of poverty. It is through a combination of the dimensions of poverty, i.e., low household income, limited education, no health insurance, low-income area, and unemployment, that individuals find themselves within a higher

propensity to not be able to afford basic human needs. As displayed in Figure 1, each of these five areas has a percentage of the population that falls into that specific classification.



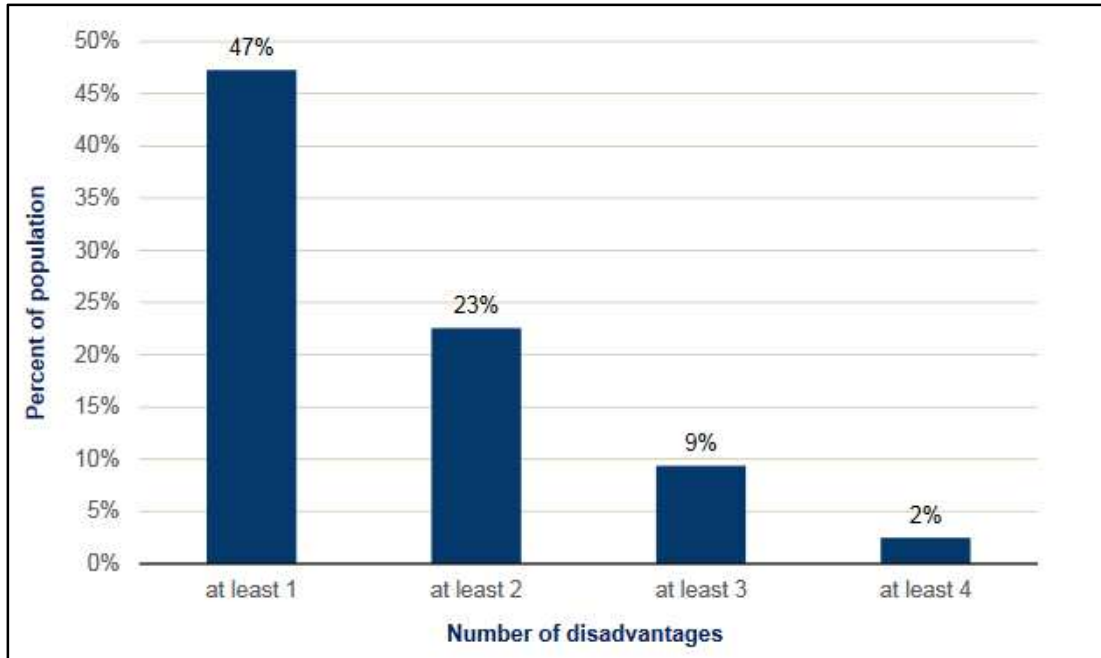
*Figure 1.* The Five Dimensions of Poverty (Reeves, Rodrique, & Kneebone, 2016, p. 6)

Multidimensional poverty attempts to look at the broader aspects of what creates true poverty through these five different areas that coalesce to form the ideal scenario in which poverty thrives.

As noted in Figure 2, while 47% of the U.S. population has at least one dimension of poverty, it is not until there is a combination of two factors that we see the 23% that mirrors the percentage of the United States population typically classified as living in poverty (Reeves, Rodrique, & Kneebone, 2016).

Multidimensional poverty also supports the concept that poverty is not able to be

defined as a singular number tied to a household income. Poverty is much too complex of an issue to be summarized and defined so easily.



*Figure 2. Half Face at Least One Disadvantage (Reeves, Rodrique, & Kneebone, 2016, p. 7)*

**Types of poverty.** While the exact definition of poverty is generally hard to define, there are six distinct types of poverty with specific criteria to classify each. These are absolute poverty, generational poverty, situational poverty, relative poverty, rural poverty, and urban poverty (Corporation for National & Community Service, 2008; eSchoolToday, n.d.; Jensen, 2009; Kumar, 2018). Individuals can fall under more than one classification depending on personal circumstances.

Absolute poverty is considered rare in the United States in modern times (Chandy & Smith, 2014). Absolute poverty involves a scarcity of basic human needs

and services, i.e., food, clean water, shelter, education, or health needs. Due to governmental intervention at the federal, state, and local level, there are opportunities for assistance to meet these basic needs within the United States. The chance for this assistance to be available to those in absolute poverty through governmental entities cannot be stated globally (World Bank, 2016).

Generational poverty occurs when you have at least two consecutive generations born into poverty (Sharkey & Elwert, 2011). The Utah Department of Workforce Services Intergenerational Welfare Reform Commission (n.d.), for example, has clarified generational poverty as when an individual has received public assistance for at least 12 months as an adult as well as for 12 months as a child. While the percentage of the population that qualifies for this type of poverty had declined during recent times, this subsection of the population remains one that theoretically should be the easiest to define and work towards assisting (Pimpare, 2014). Students in this category do not have the family resources to fall back on when attempting to break the cycle. Through educational guidance and support, U.S. Department of Education (2018) programs such as Upward Bound can target this group specifically to provide the necessary support.

Situational poverty is typically the most frequently occurring type of poverty. This type of poverty occurs when an individual or family find themselves without the financial resources necessary to meet their needs due to an occurrence that has happened (Jensen, 2009). Such events as severe medical issues, divorce, or natural disasters can create a sudden and unanticipated loss in income or heavy financial



burden when coupled with a failure of financial planning through a lack of savings or available funds to sustain through the hardship, though typically temporary, situational poverty can lead to other types of poverty listed.

Relative poverty is not necessarily a new terminology or concept itself. Well described by Townsend (1979) in *Poverty in the United Kingdom*, relative poverty can be summarized as a broad stroke classification that encompasses individuals whose income is not sufficient to meet the demands of their geographical location's average standard of living. As previously discussed, the true-life value of a dollar fluctuates significantly within the United States. Whereas a family income of \$100,000 per year would live comfortably in most rural areas of the Midwest, this would be insufficient to meet the needs of the same family in heavily urbanized areas such as New York, Atlanta, or San Francisco (Council for Community and Economic Research, 2018).

The remaining two types of poverty, urban and rural, are based around the population of the individual's surrounding community. Each of these has its own separate set of issues associated with that type of poverty. Urban poverty results from, and in an overburdened system of support that is ill-equipped to deal with the demand for high numbers in a small geographical area as well as gentrification, increased levels of crime, or economic opportunities (Desmond, 2012; Ludwig, Duncan, & Hirschfield, 2001; Wu, Webster, He, & Liu, 2012). Rural poverty, which typically is 5% higher per population segment than urban poverty, results from a lack of available employment coupled with a lack of available government resources due to the remote

location and lack of adequate funding due to low population density (Gurley, 2016; USDA-ERS, 2018).

**Student cognitive attributes.** All the discussion on the importance of SES background does not mean that being low SES does not involve physical differences between different classifications of students. It appears that one of the most significant physical changes observed concerning academic achievement is cognitive ability and control. Students of low SES cognitively use their brain differently as compared to students of a higher SES. D’Angiulli et al. (2012) researched event-related potentials (ERP) and other electroencephalographic evidence to determine cognitive use of the brain. Children were monitored while being asked to conduct specific tasks. Cortisol levels were assessed through saliva samples to help understand the relationship between these two variables. “Consistent with previous results and some of our hypotheses, we have found that the higher-SES group showed a greater ERP differentiation between attended (relevant) and unattended (irrelevant) distractors in midline electrodes” (D’Angiulli et al., 2012, p. 12). It appears that distractions have a more significant reaction to the cerebral activity of low SES students compared to higher SES students. This results in low SES students’ brains functioning a higher percentage of the time as compared to their peers. In turn, the persistent use of cognitive abilities can lead to higher levels of mental fatigue throughout the day.

Cognitive ability is not just displayed with scientific equipment. Measurements through testing also support the idea that individuals of differing SES

function at differing levels. Mani, Mullainathan, Shafir, and Zhao (2013) used a combination of Raven's matrices and a collection of cognitive control tasks to classify adult cognitive function. These results were then broken down into different categories of SES. It was found that once all other variables were accounted for, individuals of a lower SES performed at a lower level than those of a higher SES. The results were comparable to the effect of losing a full night of sleep (Mani et al., 2013). Individuals, both children, and adults, of a low SES, are mentally taxed at a higher level than their peers. More cognitive ability is required to stay on task and avoid distractions, resulting in greater mental fatigue and the opportunity to make mistakes or poor decisions.

Student perceptions and expectations also change because of SES. Low SES students can feel that they are being discriminated against (Tomul, Celik, & Tas, 2012), that instructional staff does not care (McKnight, 2015), or that they are not capable of performing academically at the same level as their higher SES peers (Kalaycioğlu, 2015). Students are often unhappy with certain aspects of their education. At younger ages, they understand that the purpose of school is to learn (Gentilucci, 2004). This understanding does not mean that they are content with the pedagogy utilized by the instructional staff. Such issues as unchallenging curriculum, teacher misbehavior, overuse of cooperative learning, or inadequate instruction are detrimental to the education of any child (Gentilucci, 2004). When additional factors created by low SES are added to this equation, the results can be disastrous. Students

begin to define themselves as the problem rather than seeing that their situation is a part of the problem.

Student expectations can have a devastating result on their education. As low SES students begin to see themselves as being less capable academically, their grades begin to decline, eventually resulting in a higher propensity to drop out of high school at a higher proportional rate to their peers (Chapman, Laird, Ifill, & KewalRamani, 2011). Low SES students who graduate from high school still have a lower success rate of attaining a bachelor's degree within eight years as compared to their middle SES or high SES peers, 16% compared to 29% and 60% respectively (USDE – NCES, 2015). This process helps to perpetuate the generational poverty that has become symptomatic of certain portions of the United States.

**Teacher attributes.** The overwhelming majority of teachers who enter the educational workforce are not of an ethnic minority. Most individuals who enter the teaching profession are white and female (Landsman & Lewis, 2011; USDE – NCES, 2017). Furthermore, many are from a middle to high SES level resulting in immediate diversity gaps between themselves and the students they are expected to teach (Chennault, 2010; USDE – NCES, 2010). It has been recognized that diversity is an issue in the school system and most pre-service teaching programs attempt to address this issue. Unfortunately, it appears that most of the diversity that is integrated into the programs concern ethnic diversity rather than social class diversity (Kritzer & Ziebarth-Bovill, 2012; Morrell, 2010; Skepple, 2015).

While teaching candidates express the notion that they recognize the issues of dealing with individuals of other races, they are woefully unprepared to deal with students from differing social classes. As stated by a pre-service teacher after taking a driving tour of a low SES community, “For someone like me who has led a sheltered life, taking this driving tour was very disturbing, shocking. [...] I always assumed everyone lived just as I did” (Bennett, 2008, p. 252).

At issue is the preconceived attitudes and beliefs that pre-service teachers bring to the classroom. They have strong personal convictions about student achievement and potential, also known as educational deficit modeling (Harry & Klinger, 2007), deficit thinking (Valencia, 1997), or deficit perspective (EdChange, 2010), and a myriad of other factors that carry over to the classroom. While educational deficit modeling is typically associated with special education or minority cultures, this does not preclude teachers from including children of poverty with this classification of lowered expectations. Unfortunately, this categorization of these students is typically based upon their background which is dissimilar to those they are teaching (Ford & Quinn, 2010). Though pre-service teachers may have been exposed to other various ethnic backgrounds, they typically have little experience dealing with those outside of their SES class (Galen, 2007). The ensuing results of these lowered standards can be catastrophic for a student's education.

Pre-service teaching programs are attempting to work towards closing these gaps through various programs. While there seem to be organizations that work with secondary educational institutions, such as the Association of American Colleges and

Universities, to integrate diversity training and opportunities into their curriculum, there does not appear to be any singular requirement, direction, or expectation as to what this training should include or how it should be implemented. Each institution seems to be allowed to create the training as it sees best to meet its needs.

Unfortunately, this provides for fractured standards across the United States.

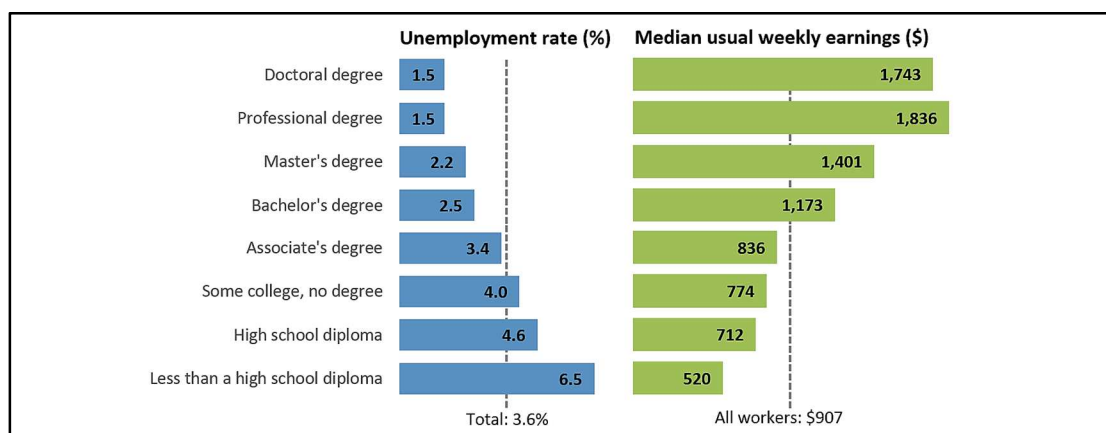
Diversity training has been integrated into virtually every aspect of most pre-service programs. Universities provide diversity training programs, courses, teaching experiences, interactions, field experiences, and conferences that are directly centered on the issue of diversity (Bahls & Chapman, 2017; Bennett, 2008; Beutel & Tangen, 2018; Chennault, 2010; Freeman, Izzard, Faulkner, & Charles, 2012; Moloney & Saltmarsh, 2016; Phillips & Wood, 2017; Reiter & Davis, 2011; Sumner, Sgoutas-Emch, Nunn, & Kirkley, 2017). Unfortunately, when dealing with an issue that is not considered essential or of value by pre-service teachers due to their preconceived notions, this training is only mildly effective. Additionally, the specific issue of SES diversity is rarely mentioned outside of being associated with minority students, helping to drive forward stereotypes concerning low SES students (Chennault, 2010; Ford & Quinn, 2010; Howard, 2002; Reiter & Davis, 2011; Warren, 2002).

All of this combines to create expectations that teachers have concerning their students. Teacher expectations drive forward virtually everything in their classroom, from their interpretation of the curriculum they teach, which is typically created as a one-size-fits-all model, to their classroom management skills, and finally to the evaluation of their students (Borman & Kimball, 2005; Egalite, Kisida, & Winters,

2015; Westphal et al., 2016). When a teacher has a lower expectation of their students, the bar may be lowered of what is taught to meet these low expectations. Why would a teacher attempt to put forward a concept or theory in the classroom while fully expecting the students not to be able to grasp or understand the idea? Teachers believe that the student will fail, leading to lower self-esteem of the student and poor performance during standardized testing. Instead, teachers spend time covering material that they believe the students are capable of understanding. The students are cheated of their potential, not being offered the information and knowledge associated with their grade level, all because of lowered teacher expectations.

The resulting degradation of education can result in long-term ramifications. As low SES students' progress through the system, these low expectations over time collectively hurt and impede any chance of long-term success. Low SES students score lower on standardized testing resulting in fewer opportunities for grants, scholarships, or state assistance directly correlating with the associated scores (Colgren & Sappington, 2015; Lee, Daniels, Puig, Newgent, & Nam, 2008). They are forced to take student loans or seek federal aid for remedial secondary education courses which do not count towards an undergraduate degree but cost the same as credit-bearing courses. These students struggle to meet the expectations of their higher education faculty as they have not been held accountable due to the lowered expectations through their PK-12 education (Barry & Dannenberg, 2016). The result is that low SES students fail to attain a post-secondary credential while still having

accrued the financial burden working toward the degree (USDE – NCES, 2015). As displayed in Figure 3, the expected income gap between a high school graduate and an individual who attains a college degree ends up being substantial over a lifetime (U.S. Bureau of Labor Statistics, 2018).



*Figure 3. Unemployment Rates and Earnings by Educational Attainment (United States Bureau of Labor Statistics, 2018)*

Low SES students typically do not graduate from college, if they even attempt to go. This lower level of educational achievement means that their long-term income opportunities are greatly diminished. The lower levels of income, in turn, reinforces the chances of them falling into situational poverty which is typically overcome due to job opportunities through education. The cycle of generational poverty persists since the adults do not have the education level to attain a living wage that enables them to subsist within their locale. Our actions as educators and leaders have a direct impact on their educational attainment. While teaching may not be personally lucrative, educators have a strong influence on whether their students will have the opportunity to attain employment that can lead to financial wealth and stability. All of



this leads to the conclusion that when education fails, the cycle of generational poverty is sustained as another generation is forced to deal with lowered teacher expectations due to their lower SES.

**Professional learning.** A teacher's growth and development should not stop once he or she has graduated from college and attained a teaching license. Once entering the classroom, most are exposed to the diversity of it. Courses may have been taken concerning diversity in the classroom or how to create an inclusive learning environment. Unfortunately, putting theory into practice is quite often difficult. Preconceived ideas concerning classroom management theory that future teachers learn in a classroom do not necessarily equate into success once that teacher enters the real classroom for the first time. Once this realization is encountered, a point is reached where it is necessary for the teacher to look for additional guidance and assistance. Professional learning helps to realize this opportunity.

A primary goal of professional learning is the improvement of teacher quality. "Quality teaching has been identified as a key system influence on outcomes for diverse students" (Alton-Lee, 2003, p. 24). It has been shown there is a direct correlation between teachers that are labeled as "high quality" and improved students' success (Alton-Lee, 2003; Borman & Kimball, 2005; Goldhaber, 2016). Active professional learning affords teachers the tools and knowledge to become higher quality teachers. By addressing topics and issues that are directly related to their classroom environment, they are provided with means, ideas, and concepts that they

can take back with them and integrate into their daily interactions with all their students.

The school itself can play just as an essential part. While teachers are the individuals who typically deal with students on a day-to-day basis, the entire school sets the tone and atmosphere for student growth and development. There is a plethora of documentation that substantiates that the socioeconomic profile and quality of a school plays an essential role in the academic outcome of its students (Gemici, Lim, & Karmel, 2013; Gonski et al., 2011; OECD, 2010; Perry & McConney, 2010; Watson & Ryan, 2010). The quality of the educational environment is of even greater importance concerning low SES students. By providing high-quality schools that address the individual and collective needs of students, a goal is set that many schools strive to achieve through their services: developing an individual who provides worth to their society. “For low-achieving students, the impact of moving from a low-academic-quality to a high-quality school more than doubles the chances of a low SES student completing Year 12” (Lim, Gemici, & Karmel, 2014, p. 103). One of the ways that a school can improve is through the development of teachers.

Unfortunately, the development of teachers and other instructional staff through professional learning is not necessarily the answer to dealing with SES issues. Dorozhkin, Saltseva, and Steinbery (2016) state that:

... the scientific and academy approaches to the issue of the continuing professional education and advanced training that has been proven, do not provide for widening of socio-cultural range and individual potential of the

student; they do not help much in their socialization and gaining a modern socio-professional self-identification; they are mostly aimed for teaching a narrow range of professional knowledge and skills. (p. 9349)

Most professional learning is not designed to address the concerns of diversity and SES. Professional learning is most effective when dealing with a single primary topic rather than addressing multiple topics at the same time (Ingvarson, Meiers, & Beavis, 2003). The concept that a singular group should be of primary concern for professional learning and classroom instructional design could be considered contradictory given that modern pedagogy emphasizes the fact that all classrooms should be designed to be inclusive (Angus & De Oliveira, 2012; Colbert, 2010; Colgren & Sappington, 2015; Ford & Quinn, 2010; Freeman, Izzard, Faulkner, & Charles, 2012). If this were the fact, all professional learning would incorporate aspects of all differing diversity into their design and training. An effort to address all differing diversities may be attempted but is not a reasonable expectation.

In today's increasingly segmented society where ethnicity and gender identity issues play a prominent role in the classification of individuals, the needs of today's students require us as educators to change our perspectives on poverty and educational outcomes. This does not necessarily mean that all professional learning is a failure. It does mean that if SES diversity is going to be addressed, professional learning must be explicitly geared to this issue.

**Limitations of the study**

There is research that is contradictory to the information that has been presented thus far. Gerhardstein, Dickerson, Miller, and Hipp (2012) use data collected from infants concerning simulation for mobiles and reactionary kick rates to demonstrate that for full-term infants, excluding those diagnosed with cognitive abnormalities, SES does not indicate a discernable difference involving activity rate, learning rate, or expectations of learning. The theory that full-term infants of all SES start at the same point cognitively is also supported by Tucker-Drob, Rhemtulla, Harden, Turkheimer, and Fask's (2011) research that supports the theory that discernable differentiation involving infants does not begin to appear until around ten months of age. It is expected that all full-term infants are capable of learning at a similar rate from birth.

Physical fitness and weight are other areas where SES plays a part but not as one might initially expect. Much research has taken place to draw a correlation between SES and a student's weight. Students from a lower SES typically are expected to have less variety concerning meals and diets that consist of smaller numbers of fruits and vegetables available and consumed (Delva, Johnston, & O'Malley, 2007; Delva, O'Malley, & Johnston, 2006). The understanding that even though low SES children have what is considered a lower quality diet, this does not necessarily mean that lower SES students are in worse physical fitness than their peers. Research conducted involving an urban; public Illinois middle school found that, "... SES seems to be related to physical fitness in girls but not in boys" (Bohr,

Brown, Laurson, Smith, & Bass, 2013, p. 546). This finding runs contradictory to the theory that SES is a differentiating factor in high school students. There is other research that is supportive of the opinion that there is a correlation between low SES students and a decrease of physical fitness once all other variables were accounted for (Gutuskey, Fahlman, & Hall, 2014). Due to this inconsistency, it is not appropriate to be used as a supportive function concerning the topic of this specific research.

Finally, there is an external variable of sleep as related to a student's situation. Sleep problems have been documented in the past concerning their negative repercussions for the individual. These problems can have a heavy burden on multiple aspects of a child's cognitive development (Buckhalt, El-Sheikh, Keller, & Kelly, 2009; Sadeh, 2007) as well as impairing the child's attention, learning, and memory (Owens, 2009). These combined can have a devastating effect on the child's academic development and growth. For children whose sleepiness increased, or decreased less rapidly as compared to their peers, verbal comprehension was seen to grow less quickly over a documented 3-year period (Bub, Buckhalt, & El-Sheikh, 2011). While it has been shown that sleep deprivation and poor sleep is of higher prevalence in children of lower SES, this is also the case of higher SES African American children as well. It is suspected that this may be associated with subcultural norms and customs that play a part of the African American culture (Landrine & Klonoff, 1996; Owens, 2004). Since this theory is based on cultural norms as opposed to SES, it runs contradictory to the fact that sleep deprivation and associated problems are primarily relevant to low SES children.

**Limitations of the capstone**

This capstone project did not intend to claim that SES is the sole determining factor concerning a student's future. As well, this capstone did not attempt to substantiate the claim that all students of a similar SES should be categorized and evaluated by the same set of standards. Every student is an individual entity and should be considered as such.

The professional learning modules created for this capstone were not without limitations. These limitations included the personal background and experiences of the author, the instructional design selected, potential participant interaction, and the local area of the training.

The author of the capstone has experience with poverty, living in it as a child and through educating students as a teacher of five years. This has greatly attributed to my perception of the topic. Were this capstone presented by someone else, the personal stories and background information that lends credibility to the speaker are minimized (Fleshler, Ilardo, & Demoretcky, 1974; Straker, n.d.). A copious amount of time, energy and effort have been spent collecting, evaluating, and analyzing the data that supported and influenced the information that was provided. An external speaker may not have this personal resource upon which to draw.

The instructional design of a singular presenter with participant interaction and small group work was selected for ease of use across a broad spectrum. The eventual goal was for the capstone to be made widely available for maximum exposure. This required a format that was easily accessible across a broad range of

platforms of knowledge distribution. This could include a presentation to a large group, a smaller setting for more one-on-one interaction, or the creations of an online training seminar for use in remote or time restrictive circumstances. A traditional presentations style was selected as the optimal instructional design to meet these requirements. Three presentations were created to present the information. I drew upon personal experience as a trainer in the military as well as academic education when creating visually appealing presentations, forming a logical progression of the information that was being presented, and interject questions and activities to maximum participant interaction. As this professional learning was created with the potential of other individuals leading the training, an accompanying Presentation Guidebook is a future step to be completed at a later time.

Participant interaction is instrumental for knowledge retention (Dallimore, Hertenstein, & Platt, 2016). When communicating with adults, the outside factors that are not related to the training can cause personal distractions that are detrimental to the learning environment. An ideal learning environment is not always accessible. This capstone attempted to interject regular questions and conversational discourse among the participants to maintain active engagement with the learning. By requiring the participants to interact with one another, an open standard was set within the group to keep attention. When a member fails to participate actively, the pressure is informally placed as a result of the group matrix of learning.

The local economic environment of the educational district can hold a heavy sway with the educators concerning their opinions and attitudes of the usefulness of

poverty training. Unfortunately, poverty is widespread throughout the United States as noted earlier. This does not mean that there are locations where it is less prominent than others. While poverty is more prevalent in rural and urban areas, it has begun a shift towards suburban populations as well (Kneebone, 2017; Hochstenbach & Musterd, 2017). Some participants may not recognize this and believe that the information and training provided is not relevant to their classroom. The unfortunate attitude may be that if they work in an affluent district, they will not have any students of poverty in their classroom.

### **Reflections**

Poverty is an issue that affects millions within the United States. Though poverty has been addressed for decades by governmental and private agencies, this blight upon American society persists. Education is viewed as one of the primary bastions that can make a difference for the long-term stability of a child as they become an adult. Unfortunately, the expected equity of the modern classroom does not appear to exist for a myriad of reasons.

Most traditional educators do not come from the same background as their low SES students (Chennault, 2010; Landsman & Lewis, 2011; USDE – NCES, 2010; USDE – NCES, 2017). The differences in backgrounds can have a substantial detrimental effect on the ensuing educational experience of these children. Though most universities and colleges attempt to train pre-service teachers about diversity, the overall results appear to be flat once they enter the classroom as reflected by the abysmal percentage of low SES students who are likely to attend or graduate from



higher education compared to their peers. Novice educators who are ill-prepared to deal with the cultural and social challenges that appear in their classrooms results in lowered expectations and a lack of empathy or understanding of low SES students. This can result in a student's diminished academic attainment and failure to pursue future knowledge (Kennedy, 2010; McKnight, 2015; Westphal et al., 2016). Students who should have the opportunity to achieve and thrive find themselves without financial stability and enter, or remain, in generational poverty.

Technological advances in the field of medicine have given rise to numerous discoveries concerning cognitive functions (Gillespie, Best, & O'Neill, 2012; Meng, Deng, Wang, Guo, & Li, 2015). Among these discoveries are the effects that stress and poverty have on the brain of a child (Patenaude, 2015; Zimmerman, 2014). Recognition that low SES students act differently is easy; understanding that their brains perform differently than their peers is something different (D'Angiulli et al., 2012). Chronic, toxic stress has a detrimental effect on these students. Unfortunately, this topic is not one that is covered during pre-service teacher education or training.

Research is abundant about different methods and pedagogy concerning students of poverty (Kennedy, 2010; Meiers, 2003; NEA, 2016; Ragoonaden, Sivia, & Baxan, 2015). Through specific, targeted professional learning, educators, many educators who have become aware of the gap in their educational knowledge base of dealing with low SES students can learn tools, techniques, and mindsets to make a difference in the lives of these children. Empathy combined with high classroom expectations and rigor can lead to academic success for the poorest students. Proper

preparation and guidance in the educational environment of K-12 could lead these students towards financial stability later in life.

All of this coalesces into what could be considered a perfect storm for our students of poverty. One hopes that our educators omit proper pedagogy concerning all students in the classroom based upon ignorance rather than malice. This is the primary focus and purpose of the capstone. Through the attainment of knowledge, educators, administrators, and other stakeholders within the educational community may recognize unknown deficiencies within their actions. The lens through which they observe their surrounding may be altered to see the specific needs of this group of children.

The capstone provided the reader with background knowledge on poverty, a glimpse into how it affects students, and some simple, research-driven methodologies in which to address a systematic failure of the public educational system. This capstone was an effort to bring equity to the classroom. One should realize that social equality is not attainable without classroom equity to meet the unique needs of this diverse subset of the student population.

### **Capstone project**

The capstone was comprised of three separate modules. Each module is designed to address a specific set of topics related to low SES students. For maximum effectiveness, the modules are presented in chronological order as they are intended to build the participants pieces of knowledge in a scaffolding fashion. Each of the

modules has activities associated with the specific topic built into the presentations to maintain participant attention and interaction.

The modules are best suited in a small-group discussion format. Ideally, participants would be seated in groups of 4-6. This would allow for all members to communicate past experiences and opinions openly. Smaller groups support greater input while larger groups tend to limit conversations and input from all individuals. This could be accomplished in a designated professional learning environment or smaller segments during the time allocated for Professional Learning Communities.

**Module 1.** The first module was designed to provide a brief background and familiarization about poverty (see Appendix A). An introduction takes place at the beginning to help establish credibility with the participants by relating my experiences dealing with poverty. Participants would be asked to introduce themselves to each other as they would be working together discussing various topics and information during the module. Participants will be asked to start a short conversation about what their concept of what poverty is and transitioning deeper into explaining why they believe this is the case. The establishment of the Federal Poverty Guidelines is described followed by data concerning household income as the single standard for determination of support. After looking at household incomes across the United States, the question “Is it appropriate to have a singular figure used to define poverty across the entire United States?” is posed to the group for discussion.

The second portion of Module 1 is an examination of the various types of poverty; absolute, generational, situational, relative, rural, and urban. Each is

independently examined to allow participants to recognize the different factors and effects associated with each. Figures are presented to draw a focus on why situational poverty is most common followed by data existing about specific locals within the United States to help to understand the concept of relative poverty. Examples are provided showcasing how rural poverty can result in a lack of services despite the dire need and how this effect can also happen concerning urban poverty as services are overwhelmed resulting in a lack of available services.

**Module 2.** The second module (Appendix B) is concerned with justifying why there is a need for educators to involve themselves with low SES students and a brief view of some of the cognitive differences between students of poverty and their peers. Though the modules were designed to be used in sequential order, introductions are still included in the format as there is much information to be presented from all three modules. The expectation is that there will be an elapsed time between the first and second module to allow the participants to reflect upon what they have learned. Seating arrangements can be mixed between modules to create a greater diversity of ideas between participants.

Justification concerning the importance of poverty training is based on statistical numbers and data that reflect the stark reality and future that most low SES students will face over their lifetime. It begins with the understanding that nearly one in every five children live in poverty during their lifetime, examine the multidimensional definition of poverty, and look at the number of low SES students that attend and graduate college versus their peers. This section finishes by stating

what current unemployment numbers per educational attainment and income figures of those that graduate from high school as opposed to that that obtain a college education.

The second portion of the module is related to conative and physiological differences between students of poverty and their peers. Cortisol, the steroid hormone that is associated with chronic stress, is highly detrimental to children. This imbalance can lead to mental (Gnanendran, 2016; Harvard University, 2018), emotional (West, 2015), and physical symptoms (Henkin, 2015) that harm children. Synaptic development and the eventual pruning of what the brain deems "unnecessary" synaptic neurons beginning in the pre-adolescent years can result in brains that are wired for self-sustainment and survival rather than on retaining the cognitive routes that are associated with knowledge retention and conceptual theory that is a hallmark of the current educational system.

**Module 3.** The third module (Appendix C) is the implementation and modification of classroom practices for educators. Rather than providing an extensive list of multiple alterations in classroom procedures and protocols that would require an educator to revisit a sizable portion of their daily routine, six topics are discussed to start addressing the disparity and issues of low SES students. This module could theoretically be used as a stand-alone professional learning seminar. Using this module by itself is emphatically not advised as the information presented during the first two modules helps to lay the foundation regarding the importance and justification for these changes to be implemented.

Following introductions of the presenter and participants, the professional learning session begins with the concept that an educator's attitude and perception of low SES students is paramount in the classroom. Research supports that an educator's attitude, behavior, and expectation of low SES students typically reflects student achievement and growth. By understanding this simple statement, educators recognize that they can make a difference in helping prepare a student for their future more than they had initially thought. The six primary concepts are an educator's pedagogy is instrumental, equity versus equality, poverty is a way of life, classroom rigor is required, building with background, and college and career readiness. Each of these areas is examined as to their relevance along with examples of simple ways that they can be built into the classroom structure without the educator being forced to make dramatic and drastic changes to a teacher's pedagogy.

### Executive Summary References

- Alexander, T. (2011, September). *How the environment affects our health & our hormones* [PowerPoint slides]. Retrieved from <https://www.rushcopley.com/app/files/public/2162/pdf-rcmg-environment-and-hormones-presentation.pdf>
- Alton-Lee, A. (2003). Proceedings from ACER Research Conference 2003: *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis – What role this kind of work can and can't take in building teaching quality?* Camberwell, VIC: Australian Council for Educational Research
- Angus, R., & De Oliveira, L. C. (2012). Diversity in secondary English classrooms: Conceptions and enactments. *English Teaching: Practice and Critique*, 11(4), 7-18.
- Australian Early Development Census (AEDC). (2015). *Brain development in children* (AEDC Publication No. AEDC-1501-084-1.1). Melbourne, VIC: Australian Early Development Census.
- Bahls, P., & Chapman, R. (2017). Got privilege? An honors capstone activity on diversity, equity, and inclusion. *Honors In Practice*, 13, 89-105.
- Banks, J. A. (1993, September). Multicultural education: Development, dimensions, and challenges. *The Phi Delta Kappan*, 75(1), 22-28.

- Banks, J. A., & Tucker, M. (1998). Multiculturalism's five dimensions. *NEA Today Online*. Retrieved from <http://www.learner.org/workshops/socialstudies/pdf/session3/3.Multiculturalism.pdf>
- Banks, J. A. (2008, April). Diversity, group identity, and citizenship education in a global age. *Educational Researcher*, 37(3), 129-139.  
[doi.org/10.3102/0013189X08317501](https://doi.org/10.3102/0013189X08317501)
- Banks, J. A. (2015). Failed citizenship, civic engagement, and education. *Kappa Delta Pi Record*, 51, 151-154.  
[doi.org/10.1080/00228958.2015.1089616](https://doi.org/10.1080/00228958.2015.1089616)
- Banks, J. A. (2017, October). Failed citizenship and transformative civic education. *Education Researcher*, 46(7), 366-377.  
[doi.org/10.3102/0013189X17726741](https://doi.org/10.3102/0013189X17726741)
- Barry, M. N., & Dannenberg, M. (2016, April). *Out of pocket: The high cost of inadequate high schools and high school student achievement on college affordability* (Rep.). Education Reform Now.
- Bennett, M. M. (2008). Understanding the students we teach: Poverty in the classroom. *The Clearing House*, 81(6), 251-256.  
[doi.org/10.3200/tchs.81.6.251-256](https://doi.org/10.3200/tchs.81.6.251-256)



- Beutel, D. A., & Tangen, D. (2018, March). The impact of intercultural experiences on preservice teachers' preparedness to engage with diverse learners. *Australian Journal of Teacher Education*, 43(3), 168-179. doi.org/10.14221/ajte.2018v43n3.11
- Beveridge, W. (1942, November). *Social Insurance and Allied Services*. London, UK: Her Majesty's Stationery Office.
- Boccanfuso, C., & Kuhfeld, M. (2011). Multiple responses, promising results: Evidence-based, nonpunitive alternatives to zero tolerance. *PsycEXTRA Dataset*. doi:10.1037/e551982011-002
- Bohr, A. D., Brown, D. D., Laurson, K. R., Smith, P. J. K., & Bass, R. W. (2013, August). Relationship between socioeconomic status and physical fitness in junior high students. *Journal of School Health*, 83(8). 542-547. doi.org/10.1111/josh.12063
- Bolman, L. G., & Deal, T. E. (2017). *Reframing organizations; Artistry, choice and leadership*. Hoboken, NJ: Jossey-Bass.
- Borman, G. D., & Kimball, S. M. (2005, September). Teacher quality and educational equality: Do teachers with higher standards-based evaluation rating close student achievement gaps? *The Elementary School Journal*, 106(1), 3-20.

Bub, K. L., Buckhalt, J. A., & El-Sheikh, M. (2011). Children's sleep and cognitive performance: A cross-domain analysis of change over time. *Developmental Psychology*, 47(6), 1504-1514.  
doi.org/10.1037/a0025535

Buckhalt, J. A., El-Sheikh, M., Keller, P. S., & Kelly, R. J. (2009, May). Concurrent and longitudinal relationships between children's sleep and cognitive functioning: The moderating role of parent education. *Child Development*, 80(3), 875-892. doi.org/10.1111/j.1467-8624.2009.01303.x

Cedeño, L. F., Martinez-Aris, R., & Bueno, J. (2016, March 29). Implications of socioeconomic status on academic competence: A perspective for teachers. *International Education Studies*, 9(4), 257-267.  
doi.org/10.5539/ies.v9n4p257

Chapman, C., Laird, J., Ifill, N., & KewalRamani, A. (2011). *Trends in High School Dropout and Completion Rates in the United States: 1972–2009* (NCES 2012-006). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Chandy, L. & Smith, C. (2014, August 26). *How poor at America's poorest? U.S. \$2 a day poverty in a global context*. Washington, DC.: The Brookings Institution.

- Chaudry, A. & Wimer, C. (2016, April). Poverty is not just an indicator: The relationship between income, poverty, and child well-being. *Academic Pediatrics*, 16(3), 23-29. doi.org/10.1016/j.acap.2015.12.010
- Chennault, R. E. (2010, Winter). Teaching graduate students about social class: Using a classifying activity with an inductive approach. *Multicultural Education*, 17(2), 56-60.
- Colbert, J. (2010). Developing a culturally responsive classroom collaborative of faculty, students, and institution. *Contemporary Issues in Education Research*, 3(9), 17-26. doi.org/10.19030/cier.v3i9.231
- Colgren, C., & Sappington, N. E. (2015, March). Closing the achievement gap means transformation. *Education Leadership Review of Doctoral Research*, 2(1), 24-33.
- Corporation for National & Community Service. (2008, April). Models of poverty: Absolute and relative. *VISTA Integrated Training Program*, 34-38.
- Council for Community and Economic Research. (2018). *Cost of living index* [Data -file]. Retrieved from <https://store.coli.org/compare.asp>
- Dallimore, E. J., Hertenstein, J. H., & Platt, M. B. (2016). Creating a community of learning through classroom discussion: Student perceptions of the relationships among participation, learning, comfort and preparation. *Journal on Excellence in College Teaching*, 27(3), 137-171.

- D'Angiulli, A., Van Roon, P. M., Weinberg, J., Oberlander, T. F., Grunau, R. E., Hertzman, C., & Maggi, S. (2012, November). Frontal EEG/ERP correlates of attentional processes, cortisol and motivational states in adolescents from lower and higher socioeconomic status. *Frontiers in Human Neuroscience*, 6(306), 1-16.  
[doi.org/10.3389/fnhum.2012.00306](https://doi.org/10.3389/fnhum.2012.00306)
- Delva, J., Johnston, L. D., & O'Malley, P. M. (2007, October). The epidemiology of overweight and related lifestyle behaviors: Racial/ethnic and socioeconomic status differences among American youth. *American Journal of Preventative Medicine*, 33(4), 178-186.  
[doi.org/10.1016/j.amepre.2007.07.008](https://doi.org/10.1016/j.amepre.2007.07.008)
- Delva, J., O'Malley, P. M., & Johnston, L. D. (2006, October). Racial/ethnic and socioeconomic status differences in overweight and health-related behaviors among American students: National trends. *Journal of Adolescent Health*, 39(4). 536-545.  
[doi.org/10.1016/j.jadohealth.2006.02.013](https://doi.org/10.1016/j.jadohealth.2006.02.013)
- Desmond, M. (2012, July). Eviction and the reproduction of urban poverty. *American Journal of Sociology*, 118(1), 88-133.  
[doi.org/10.4135/9781526402059.n7](https://doi.org/10.4135/9781526402059.n7)

- Dorozhkin, E. M., Saltseva, S. V., & Steinberg, V. E. (2016). Conceptual model of continuing professional education based on social-and-academic approach. *International Journal of Environmental & Science Education, 11*(16), 9348-9361.
- Echouffo-Tcheugui, J. B., Conner, S. C., Himali, J. J., Maillard, P., DeCarli, C. S., Beiser, A. S., Vasan, R. S., & Seshadri, S. (2018, November 20). Circulating cortisol and cognitive and structural brain measures. *Neurology, 91*(21), e1961-e1970.  
doi.org/10.1212/wnl.00000000000006549
- EdChange. (2010, December). *Unlearning deficit ideology and the scornful gaze: Thoughts on authenticating the class discourse in education*. Washington, DC: Gorski.
- Egalite, A. J., Kisida, B., & Winters, M. A. (2015, April). Representation in the classroom: The effect of own-race teachers on student achievement. *Economics of Education Review, 45*, 44-52.  
doi.org/10.1016/j.econedurev.2015.01.007
- Egalite, A. J. (2016, Spring). How family background influences student achievement. *Education Next, 16*(2), 70-78.
- eSchoolToday. (n.d.). *Types of poverty*. Retrieved from <http://www.eschooltoday.com/poverty-in-the-world/types-of-poverty.html>

Fischer, M. (2015). Zero-Tolerance Policing. *The Encyclopedia of Crime and Punishment*, 1–6. doi:10.1002/9781118519639.wbecpx188

Fisher, G. M. (1992, Winter). The development and history of the poverty thresholds. *Social Security Bulletin*, 55(4), 3-14.

Fisher, G. M. (2008). Remembering Mollie Orshansky – The developer of the poverty thresholds. *Social Security Bulletin*, 68(3), 79-83.

Fleshler, H., Ilardo, J., & Demoretcky, J. (1974, June). The influence of field dependence, speaker credibility set, and message documentation on evaluations of speaker and message credibility. *Southern Speech Communication Journal*, 39(4), 389-402.  
doi.org/10.1080/10417947409372247

Ford, T. N., & Quinn, L. (2010, Summer). First year teacher education candidates: What are their perceptions about multicultural education? *Multicultural Education*, 17(4), 18-24.

Freeman, G., Izzard, M., Faulkner, R., & Charles, J. (2012). University school of education promoting diversity awareness and initiatives. *The Professional Educator*, 36(1).

French, M. T., Homer, J. F., Popovici, I., & Robins, P. K. (2014). What you do in high school matters: High school GPA, educational attainment, and labor market earnings as a young adult. *Eastern Economic Journal*, 41(3), 370-386. doi.org/10.1057/eej.2014.22

- Galen, J. V. (2007, Spring). Late to class: Social class and schooling in the new economy. *Educational Horizons*, 85(3), 159-167.  
doi.org/10.5860/choice.45-3323
- Geiser, S., & Santelices, M. V. (2007, June 1). *Validity of high-school grades in predicting student success beyond the Freshmen year: High-school records vs. standardized test as indicators of four-year college outcomes*. Berkley, CA: University of California, Berkley, Center for Studies in Higher Education
- Gemici, S., Lim, P., & Karmel, T. (2013). *The impact of schools on young people's transition to university*. Adelaide, AUS: National Centre for Vocational Education Research.
- Gentilucci, J. L. (2004, Winter). Improving school learning: The student perspective. *The Educational Forum*, 68(2), 133-143.
- Gerhardstein, P., Kickerson, K., Miller, S., & Hipp, D. (2012). Early operant learning is unaffected by socio-economic status and other demographic factors: A meta-analysis. *Infant Behavior & Development*, 35(3), 472-478. doi.org/10.1016/j.infbeh.2012.02.005
- Gillespie, A., Best, C., & O'Neill, B. (2012). Cognitive function and assistive technology for cognition: A systematic review. *Journal of the International Neuropsychological Society*, 18(1), 1-19.
- Gnanendran, V. (2016, May 5). Three years and a lifetime [web log comment]. Retrieved from <https://aidunplugged.wordpress.com/category/violence/>

Goldhaber, D. (2016, Spring). In schools, teacher quality matters most.

*Education Next*, 16(2), 56-62.

Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., & Tannock, P.

(2011, December). *Review of funding for schooling: Final Report*.

Canberra City, AUS: Department of Education, Employment and Workplace Relations.

Gurley, L. (2016, 5 May). Who's afraid of rural poverty? The story behind

America's invisible poor. *The American Journal of Economics and Sociology*, 75(3), 589-604. doi.org/10.1111/ajes.12149

Gutuskey, L. M., Fahlman, M. M., & Hall, H. (2014). Identifying fitness-level

disparities for minority, low-socioeconomic status children. *Research Quarterly for Exercise and Sport, Supplement*, A98.

Hanover Research Council. (2010, March). The effectiveness of one-to-one

laptop initiatives in increasing student achievement. *District Administration Practice*. Retrieved from

<https://ts.madison.k12.wi.us/files/techsvc/The%20Effectiveness%20of%20One-to->

[One%20Laptop%20Initiatives%20in%20Increasing%20Student%20Achievement.pdf](https://ts.madison.k12.wi.us/files/techsvc/The%20Effectiveness%20of%20One-to-One%20Laptop%20Initiatives%20in%20Increasing%20Student%20Achievement.pdf)

Harry, B. & Klingner, J. (2007, February). Discarding the deficit model.

*Educational Leadership*, 64(5), 16-21.



Harvard University. (2018). *Toxic Stress*. Cambridge, MA: Center on the Developing Child

Henkin, P. (2015). *Chapter 9: The endocrine system* [PowerPoint slides]. Retrieved from <https://slideplayer.com/slide/3448999/>

Hiss, W. C., & Franks, V. W. (2014). *Defining promise: Optional standardized testing policies in American college and university admissions*. Arlington, VA: National Association for College Admission Counseling.

Hochstenbach, C., & Musterd, S. (2017, January 17). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26-53.  
doi.org/10.1080/02723638.2016.1276718

Howard, G. R. (2002, Spring). School improvement for all: Reflections on the achievement gap. *Journal of School Improvement*, 3(1), 9.

Ingvarson, L., Meiers, M., & Beavis, A. (2003). Proceedings from ACER Research Conference 2003: *Evaluating the quality and impact of professional learning programs*. Camberwell, VIC: Australian Council for Educational Research

Intergenerational Welfare Reform Commission. (n.d). *What is intergenerational poverty?* Salt Lake City, UT: Utah Department of Workforce Services.

- Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains and what schools can do about it*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Jeynes W.H. (2017) Effects of family educational cultures on student success at school: Directions for leadership. In K. Leithwood, J. Sun, & K. Pollock (Eds). *How school leaders contribute to student success. Studies in educational leadership* (pp. 311-328). New York, NY: Springer.
- Kalaycioğlu, D. B. (2015, October). The influence of socioeconomic status, self-efficacy, and anxiety on mathematics achievement in England, Greece, Hong Kong, the Netherlands, Turkey, and the USA. *Educational Sciences: Theory and Practice*, 15(5), 1391-1401. doi.org/10.12738/estp.2015.5.2731
- Kennedy, E. (2010). Improving literacy achievement in a high-poverty school: Empowering classroom teachers through professional learning. *Reading Research Quarterly*, 45(4), 384-387. doi.org/10.1598/rrq.45.4.1
- Kneebone, E. (2017, February 15). *The changing geography of US poverty*. Washington, DC: The Brookings Institute.
- Kumar, G. (2018). *What is poverty and its types?* Retrieved from <https://www.jagranjosh.com/general-knowledge/what-is-poverty-and-its-types-1523453034-1>

Kritzer, J. B., & Ziebarth-Bovill, J. (2012, Winter). Teaching diversity issues to pre-service teachers in rural settings. *Eastern Education Journal*, 41(1), 44-56.

Landrine, H., & Klonoff, E. A. (1996, July). Traditional African-American family practices: Prevalence and correlates. *The Western Journal of Black Studies*, 20(2), 59-62.

Landsman, J., & Lewis, C. (Eds.). (2011). *White teachers/diverse classrooms: Creating inclusive schools, building on students' diversity, and providing true educational equity* (2nd ed.). Sterling, VA: Stylus.

Lee, S. M., Daniels, M. H., Puig, A., Newgent, R. A., & Nam, S. K. (2008, June 5). A data-based model to predict postsecondary educational attainment of low-socioeconomic-status students. *Professional School Counseling*, 11(5), 306-316. doi.org/10.5330/psc.n.2010-11.306

Lim, P., Gemici, S., & Karmel, T. (2014). The impact of school academic quality on low socioeconomic status students. *The Australian Economic Review*, 47(1), 200-106. doi.org/10.1111/1467-8462.12055

Ludwig, J., Duncan, G. J., & Hirschfield, P. (2001, May). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. *Quarterly Journal of Economics*, 116(2), 655-679. doi.org/10.1162/00335530151144122

- Mala, C. L. (2016, May). Very good medicine: Indigenous humor and laughter. *Tribal College of American Indian Higher Education*, 27(4).
- Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013, August 30). Poverty impedes cognitive function. *Science*, 341(6149), 976-980.  
doi.org/10.1126/science.1238041
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396. doi.org/10.1037/h0054346
- McGaugh, J. L., & Roozendall, B. (2017). Emotional hormones and memory modulation. In *Reference Module in Neuroscience and Biobehavioral Psychology*. doi.org/10.1016/B978-0-12-809324-5.02216-1
- McKnight, A. N. (2015, Summer). “They never really tried to reach out to us”: Examining identities and confronting the emotional distance between urban youth and urban schools. *Critical Questions in Education*, 6(2), 86-102.
- McLaughlin, C. (2016, April 20). The homework gap: The ‘cruellest part of the digital divide’. *NEA Today Online*. Retrieved from <http://neatoday.org/2016/04/20/the-homework-gap/>
- McLeod, S. A. (2018, May 21). *Maslow’s hierarchy of needs*. Retrieved from <https://www.simplypsychology.org/maslow.html>
- McNeal, R. B. (2015, June). Parent involvement and student performance: the influence of school context. *Educational Research for Policy and Practice*, 14(2), 153-167. doi.org/10.1007/s10671-014-9167-7

- Meiers, M. (Ed). (2003). Proceedings from ACER 2003: *Building Teacher Quality: What does the research tell us?* Camberwell, VIC: Australian Council for Educational Research.
- Meng, Y., Deng, W., Wang, H., Guo, W., & Li, T. (2015). The prefrontal dysfunction in individuals with Internet gaming disorder: A meta-analysis of functional magnetic resonance imaging studies. *Addiction Biology*, 20(4), 799-808.
- Moloney, R., & Saltmarsh, D. (2016, April 5). “Knowing your students” in the culturally and linguistically diverse classroom. *Australian Journal of Teacher Education*, 41(4), 79-93.  
[doi.org/10.14221/ajte.2016v41n4.5](https://doi.org/10.14221/ajte.2016v41n4.5)
- Morrell, J. (2010). Teacher preparation and diversity: When American pre-service teachers aren’t White and middle class. *International Journal of Multicultural Education*, 12(1), 1-17.
- Moule, J. (2009, January 1). Understanding unconscious bias and unintentional racism. *Phi Delta Kappan*, 90, 320-326.  
[doi.org/10.1177/003172170909000504](https://doi.org/10.1177/003172170909000504)
- Murry, V., Berkel, C., Gaylord-Harden, N., Copeland-Linder, N., & Nation, M. (2011). Neighborhood poverty and adolescent development. *Journal of Research on Adolescence*, 21(1), 114-128.  
[doi.org/10.1111/j.1532-7795.2010.00718.x](https://doi.org/10.1111/j.1532-7795.2010.00718.x)

- National Education Association (NEA). (2016). *Teaching children from poverty and trauma*. Washington DC: National Education Association.
- Organisation for Economic Co-operation and Development (OECD). (2018). Are disadvantaged students affected by the socio-economic profile of their school? *Equity in Education: Breaking Down Barriers to Social Mobility*. Paris, FR: OECD Publishing.  
doi.org/10.1787/9789264073234-7-en
- Organisation for Economic Co-operation and Development (OECD). (2010). *PISA 2009 results: What makes a school successful? Resources, policies and practices*. Paris, FR: OECD.
- Owens, J. A. (2004, October). Sleep in children: Cross-cultural perspectives. *Sleep and Biological Rhythms*, 2(3), 165-173. doi.org/10.1111/j.1479-8425.2004.00147.x
- Owens, J. A. (2009). Neurocognitive and behavioral impact of sleep disordered breathing in children. *Pediatric Pulmonology*, 44, 417-422.  
doi.org/10.1002/ppul.20981
- Patenaude, M. (2015, June 18). Stress in low-income families can affect children's learning. *University of Rochester Newscenter*. Retrieved from <http://www.rochester.edu/newscenter/stress-in-low-income-families-can-affect-childrens-learning-108182/>

- Perry, L. & McConney, A. (2010, April). School socioeconomic composition and student outcomes in Australia: Implications for educational policy. *Australian Journal of Education*, 54(1), 72-85.  
  
doi.org/10.1177/000494411005400106
- Phillips, T. N., & Wood, L. I. (2017, Fall). Teaching diversity through case competition. *Journal of Learning in Higher Education*, 13(2), 25-31.
- Pimpare, S. (2014, June 27). Generational poverty the exception, not the rule. *Center for American Progress*. Retrieved from  
  
<https://talkpoverty.org/2014/06/24/deconcentrating-poverty-route-quality-schools/>
- Quas, J. A., Castro, A., Bryce, C., I., & Granger, D. A. (2018, September). Stress physiology and memory for emotional information: Moderation by individual differences in pubertal hormones. *Developmental Psychology*, 54(9), 1606-1620. doi.org/10.1037/dev0000532
- Ragoonaden, K., Sivia, A., & Baxan, V. (2015). Teaching for diversity in teacher education: Transformative frameworks. *The Canadian Journal for the Scholarship of Teaching and Learning*, 6(3), 1-16.
- Reeves, R., Rodrigue, E., & Kneebone, E. (2016). *Five evils: Multidimensional poverty and race in America*. Washington, DC: The Brookings Institute.

- Reiter, A. B., & Davis, S. N. (2011, Spring). Factors influencing pre-service teachers' beliefs about student achievement: Evaluation of a pre-service teacher diversity awareness program. *Multicultural Education*, 19(3), 41-46.
- Saxena, S., Thornicroft, G., Knapp, M., & Whiteford, H. (2007, September 4). Resources for mental health: scarcity, inequity, and inefficiency. *The Lancet*, 370, 878-89. doi.org/10.1016/S0140-6736(07)61239-2
- Schulz, S., & Fane, J. (2015, November). A healthy dose of race? White students' and teachers' unintentional brushes with whiteness. *Australian Journal of Teacher Education*, 40(11), Article 8.  
<http://ro.ecu.edu.au/ajte/vol40/iss11/8>
- Self-actualization [Def. 1]. (n.d.). In Dictionary.com, Retrieved September 25, 2018, from <https://www.dictionary.com/browse/self-actualization?s=t>
- Sharkey, P., & Elwert, F. (2001, May). The legacy of disadvantage: Multigenerational neighborhood effects on cognitive ability. *American Journal of Sociology*, 116(6), 1934-1981. doi.org/10.1086/660009
- Skepple, R. G. (2015). Preparing culturally responsive pre-service teachers for culturally diverse classrooms. *Kentucky Journal of Excellence in College Teaching and Learning*, 12(6), 57-69.



- Smith, L. (2018, February 8). Here's how much Americans have in their savings accounts. *Business Insider*. Retrieved from <https://www.businessinsider.com/how-much-the-average-american-has-in-their-savings-account-2018-2>
- Straker, D. (n.d.). Speaker credibility. Retrieved from <http://changingminds.org/techniques/speaking/articles/credibility.htm>
- Szpara, M. Y. (2006). Talk among student teachers in an urban high school: Questioning dimensions of difference. *Journal of Urban Learning*, 2, 228-242.
- Sumner, S. W., Sgoutas-Emch, S., Nunn, L., & Kirkley, E. (2017). Implementing innovative pedagogy and a rainbow curriculum to expand learning on diversity. *Insight: A Journal of Scholarly Teaching*, 12, 94-119.
- Tomul, E., Celik, K., & Tas, A. (2012). Justice in the classroom: Evaluation of teacher behaviors according to students' perceptions. *Egitim Arastirmalari – Eurasian Journal of Educational Research*, 48, 59-72.
- Townsend, P. (1979). *Poverty in the United Kingdom*. London, UK: Allen Lane and Penguin Books.
- Tucker-Drob, E., Rhemtulla, M., Harden, K.P., Turkheimer, E., & Fask, D. (2011). Emergence of a gene x socioeconomic status interactions on infant mental ability between 10 months and 2 years. *Psychological Science*, 22(1), 125-133. doi.org/10.1177/0956797610392926

United States Bureau of Labor Statistics. (2018). *Earning and unemployment rates by educational attainment, 2017*. Washington, DC: Office of Occupational Statistics and Employment Projections.

United States Department of Agriculture, Economic Research Services (USDA-ERS). (2018). *Rural poverty & well-being*. Washington, DC: USDA-ERS.

United States Department of Commerce, Bureau of Economic Analysis. (2018a). *CA1 personal income summary: Personal income, population, per capita personal income* [Data file]. Retrieved from <https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&acrdn=7#reqid=70&step=30&isuri=1&7022=20&7023=7&7033=-1&7024=non-industry&7025=4&7026=xx&7027=2016&7001=720&7028=3&7031=xx&7040=-1&7083=levels&7029=20&7090=70>

United States Department of Commerce. (2018b, November). *Table 1. Per capita personal income by county, 2015-2017* [Data set]. Retrieved from <https://www.bea.gov/data/income-saving/personal-income-county-metro-and-other-areas>.

United States Department of Education. (2018). *Programs: Upward Bound*. Retrieved from <https://www2.ed.gov/programs/trioupbound/index.html?exp=0>

United States Department of Education, National Center for Education  
Statistics (USDE-NCES). (2018, May). *Characteristics of Children's  
Families*. Washington, DC: USDE – NCES.

United States Department of Education, National Center for Education  
Statistics (USDE – NCES). (2017). *Digest of education statistics,  
2017*. Washington, DC: USDE – NCES.

United States Department of Education, National Center for Education  
Statistics (USDE – NCES). (2015). *The Condition of Education 2015*.  
Washington, DC: USDE – NCES.

United States Department of Education, National Center for Education  
Statistics (USDE – NCES). (2010). *Digest of education statistics,  
2010*. Washington, DC: USDE – NCES. United States Department of  
Health & Human Services. (2019). *U.S. Federal poverty guidelines  
used to determine financial eligibility for certain federal programs*.  
Retrieved from <https://aspe.hhs.gov/poverty-guidelines>

Utah Department of Workforce Services Intergenerational Welfare Reform  
Commission (n.d.). What is intergenerational poverty? [PDF file].  
Retrieved from  
<https://jobs.utah.gov/edo/intergenerational/whatisigp.pdf>

Valencia, R. R. (1997). *The evolution of deficit thinking: Educational thought  
and practice. The Stanford series on education and public policy*.  
Bristol, PA: Falmer Press.

- Warren, S. R. (2002). Stories from the classrooms: How expectations and efficacy of diverse teachers affect the academic performance of children in poor urban schools. *Educational Horizons*, 80(3), 109-116.
- Watson, L. & Ryan, C. (2010). Choosers and losers: The impact of government subsidies on Australian secondary schools. *Australian Journal of Education*, 54(1), 86-107.  
[doi.org/10.1177/000494411005400107](https://doi.org/10.1177/000494411005400107)
- West, R. (2015). *Adrenal fatigue and other hormones* [PowerPoint slides]. Retrieved from <http://slideplayer.com/slide/3393499/>
- Westphal, A., Becker, M., Vock, M., Maaz, K., Neumann, M., & McElvany, N. (2016). The link between teacher-assigned grades and classroom socioeconomic composition: The role of classroom behavior, motivation, and teacher characteristics. *Contemporary Educational Psychology*, 46, 218-227. [doi.org/10.1016/j.cedpsych.2016.06.004](https://doi.org/10.1016/j.cedpsych.2016.06.004)
- World Bank. (2016). *Poverty and shared prosperity 2016: Taking on inequality*. Washington, DC: World Bank.
- Woodson, L., & Harris, S. M. (2018). Teacher and student demographic variables which predict teacher referrals of males for special education evaluation. *Journal of At-Risk Issues*, 21(1), 32-43.
- Wu, F., Webster, C., He, S., & Liu, Y. (2010). *Urban poverty in China*. Northampton, MA: Edward Elgar Publishing, Inc.

Zimmerman, B. (2014, September 9). Ravaged by stress? Tips on how to reduce cortisol. [web log comment]. Retrieved from <http://beyondgoodhealthclinics.com.au/how-to-reduce-cortisol/>

## Appendices

Appendix A

**Module 1**

# POVERTY 101: HELPING THOSE THAT CAN'T HELP THEMSELVES

## MODULE 1

Bradford R. Stephens  
Bradford.Ray.Stephens@gmail.com

- ▶ Module 1: Background/Familiarization
- ▶ Module 2: Justification/Cognitive
- ▶ Module 3: Adjustment/Implementation

## AGENDA



The agenda allows the participant to see the general overview of the entire professional learning series. Due to the overall quantity of the subject matter covered, it has been broken down into three modules.



This first activity will be heavily dependent on the training location/participants. It will begin by spending a few moments talking about my background, experiences in the world of education, and a short overview of what the professional learning session encompasses. After this, a group warm-up will occur with the following parameters:

- If working with a group that is well known amongst themselves, starting with a 5-minute warm-up to let everyone get going.

- If there are participants that are not typically part of the group or are new to the group (we all know how the novice or new-hires can feel at these training sessions), then a moment to allow everyone a brief introduction for all members.
- If the group is medium to large, then allow 5-10 minutes for everyone seated together to introduce themselves. Ideally, each group will be a diverse mixture of participants. During group discussion points, the broader the backgrounds and experiences of the participants in the group, the more effective the training will be.

▶ Personal opinion

▶ There is no right or wrong answer

▶ Refrain from using the following terms:

- Poor
- Underprivileged
- Broke
- Deprived
- Needy

WHAT'S YOUR DEFINITION???

We begin by establishing what participants believe poverty is. It should first be established that all participants have their idea what the concept of poverty is. Participants should understand there is no right or wrong definition as it is based upon their personal opinion. They will write down their definition of poverty in 10 words or less. Adding to the challenge, they are not allowed to use the following terms: poor,

underprivileged, broke, deprived or needy (this forces them to think outside of the box and not rely upon the words to describe themselves.)



After this is completed, time will be spent comparing and contrasting the differences between individual definitions. What do they have in common and what variations do they note? A gallery walk approach may be taken to attain a generalized perception of poverty within the group as a whole.

▶ Federal Poverty Guidelines

▶ For a family of 4 members, how much money is enough?

▶ Be sure to consider all cost associated with living:

▶ Home

▶ Food

▶ Clothing

▶ Transportation

▶ Water

▶ Electricity

▶ Medical

▶ Phone

ALL ABOUT THE MONEY

Next, we want to put an actual numeric figure with the term. All participants will be asked to write down what they believe the annual income level is for a family of four to be considered in poverty. Remind them to consider all necessities that a family that size requires.

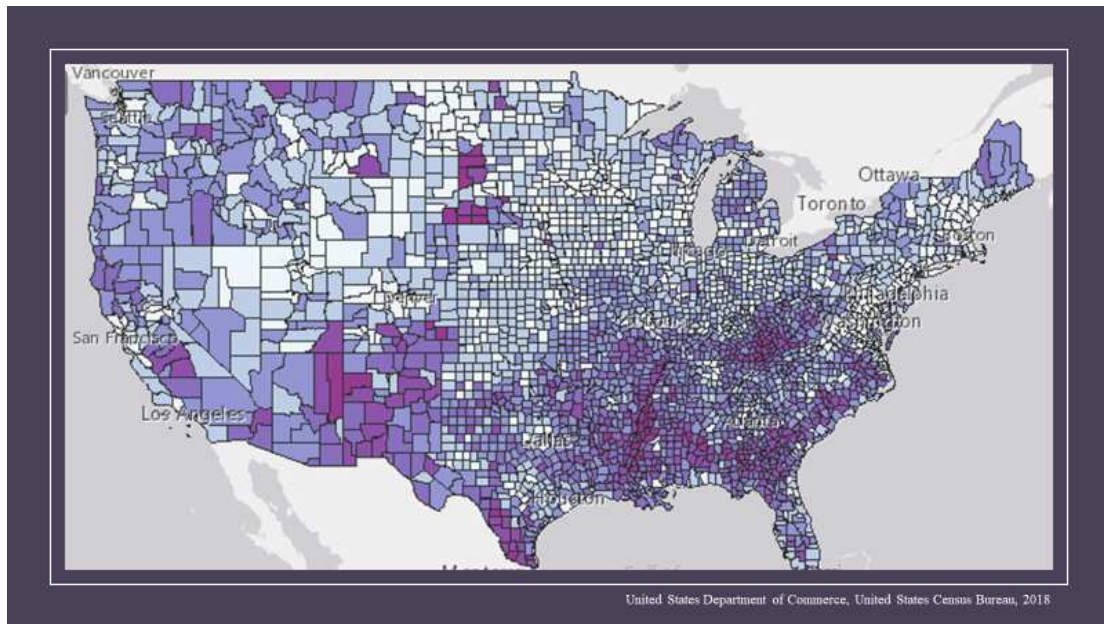
Persons in Household	48 Contiguous States and D.C. Poverty Guidelines (Annual)							
	100%	133%	138%	150%	200%	250%	300%	400%
1	\$12,140	\$16,146	\$16,753	\$18,210	\$24,280	\$30,350	\$36,420	\$48,560
2	\$16,460	\$21,892	\$22,715	\$24,690	\$32,920	\$41,150	\$49,380	\$65,840
3	\$20,780	\$27,637	\$28,676	\$31,170	\$41,560	\$51,950	\$62,340	\$83,120
4	\$25,100	\$33,383	\$34,638	\$37,650	\$50,200	\$62,750	\$75,300	\$100,400
5	\$29,420	\$39,129	\$40,600	\$44,130	\$58,840	\$73,550	\$88,260	\$117,680
6	\$33,740	\$44,874	\$46,561	\$50,610	\$67,480	\$84,350	\$101,220	\$134,960
7	\$38,060	\$50,620	\$52,523	\$57,090	\$76,120	\$95,150	\$114,180	\$152,240
8	\$42,380	\$56,365	\$58,484	\$63,570	\$84,760	\$105,950	\$127,140	\$169,520
Add \$4,320 for each person over 8								

Paying for Senior Care, 2018

## ALL ABOUT THE MONEY

Federal Poverty Guidelines

For reference purposes, the 2018 Federal Poverty Guideline for a family of four in the continental United States and Washington, DC is \$25,100. For a family of one, it is \$12,140 (Paying for Senior Care, 2018). Remind everyone that this figure is before any federal, state, and local taxes are removed and that this is an annual income. Ask them to reflect for a moment on how much this is over a monthly (\$2,092/\$1,012) or a weekly (\$483/\$233) basis.



This graphic is one created through the United State Department of Commerce, United States Census Bureau (2018b). The graphic breaks down the United States into each county according to the percentage of households living in poverty. The darker the shade of purple, the higher the percentage of households. As one can see, poverty, as defined by the U.S. government, is not evenly spread throughout the country.

Some regions experience poverty at a much higher level than others. A distinct horseshoe effect, starting primarily in eastern Kentucky and running westward, turning south through Arkansas into Louisiana, and then turning back eastward, through Mississippi, Alabama, and Georgia, only to turn back up the coast through South Carolina into North Carolina. Though this is the primary area, it is not the only one. A good portion of New Mexico, southern Colorado, and eastern Arizona are also affected.



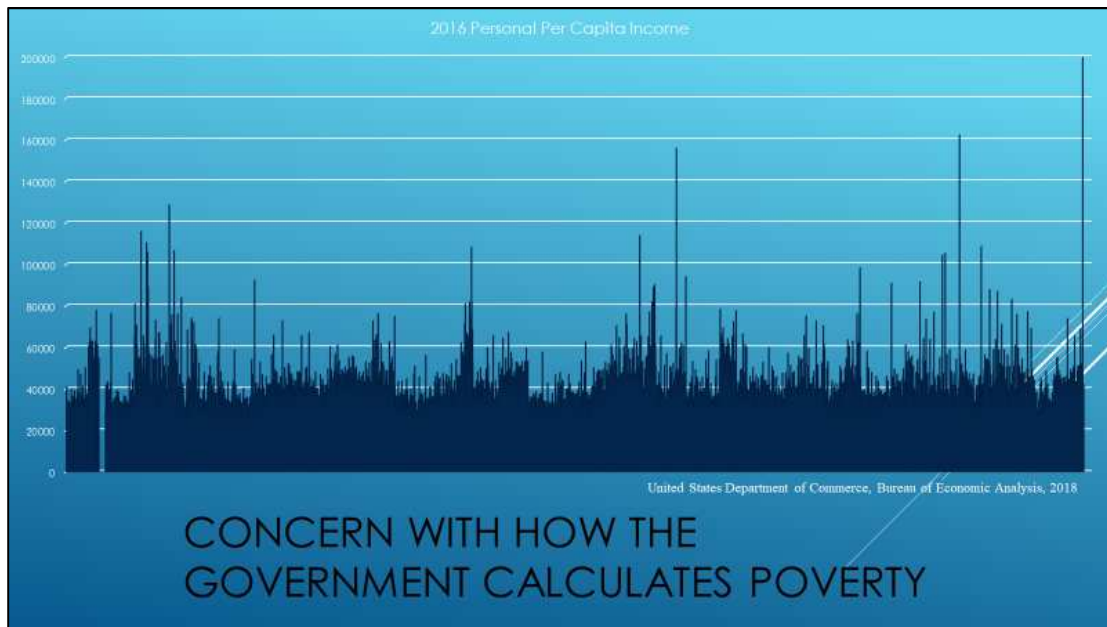
- ▶ Consumer Price Index (CPI)
- ▶ Originally devised in 1964 by the US Social Security Office
- ▶ CPI is 3 times the cost of the Economy Food Plan as determined by the US Department of Agriculture
- ▶ One figure for all of US EXCEPT Hawaii and Alaska

HOW THE GOVERNMENT DOES IT

For purposes of calculating the United States Poverty Rate, the government uses the Consumer Price Index, often referred to as the CPI. This system was initially created in 1964 by Mollie Orshansky of the U.S. Social Security Office (Fisher, 2008). Though the system has been revised and periodically updated, the premise remains the same; family monetary income, excluding any capital gains, i.e., money from stock or bonds, or noncash benefits such as food stamps or housing vouchers, is compared to three times the cost of the economy food plan, as determined by the United States Department of Agriculture, or USDA.

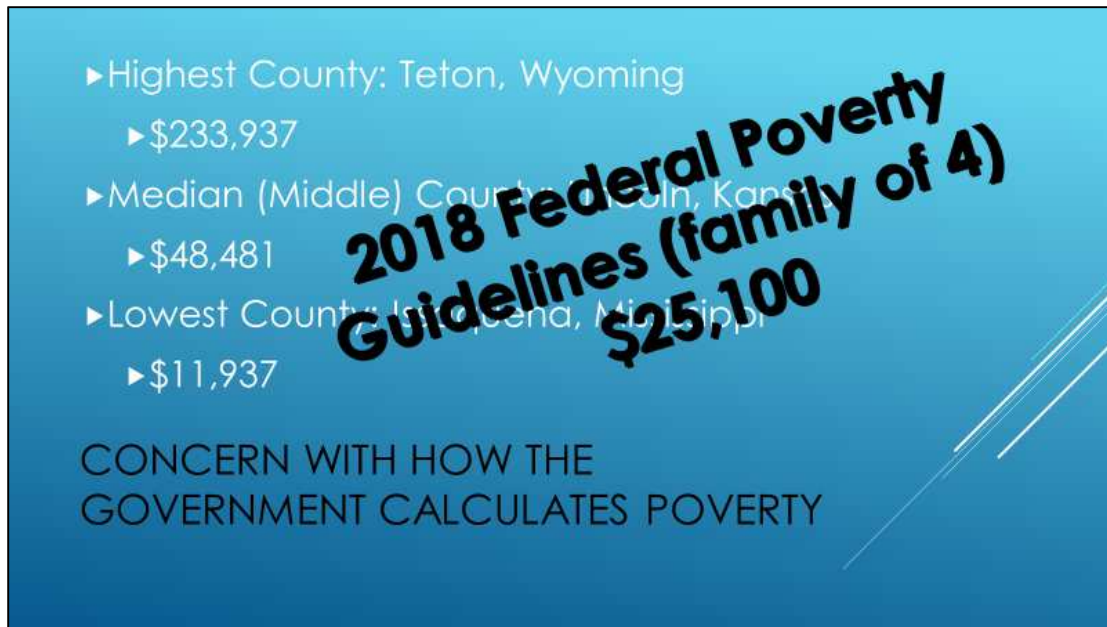
The USDA annually creates multiple food plans based upon a multitude of variables which include the caloric inputs needs based upon an individual's gender and age and the average cost of various sources of foods to meet these caloric needs. The higher the food plan, the more calories included through a greater diversity of foods. These also come at a higher price. For example, a family of four with children

between the ages of 2-3 and 4-5 are expected to live on a monthly food budget of \$556.00 with the Thrifty plan while the Liberal plan is \$1,085.40 for the same family (US Department of Agriculture, 2017). The federal poverty level is based on three times how much it should cost for them to eat enough food to survive.



This graph from the Bureau of Economic Analysis (2018a) shows the personal per capita income for each county. As you can conclude from the valleys and peaks, there is quite a bit of variation within the incomes across the United States. Personal income across the United States varies quite depending upon where one lives, job opportunity, and other cost associated with living.





For reference purposes, three different counties per capita income averages within the United States are presented. Teton County in Wyoming represents the county with the highest average household income in the United States at \$233,860 (U.S. Department of Commerce, 2018c). The lowest is Issaquena County in Mississippi at \$16,267 per household (U.S. Department of Commerce, 2018c). While these two are the extremes, the median county is Lincoln County in Kansas with an average household income of \$48,481 (U.S. Department of Commerce, 2018c).

There is quite a bit of difference between the top and bottom numbers while the average is nowhere near the middle. It is also imperative to remember that the Federal Poverty Guideline for a family of 4 is \$25,100. Ask yourself this, do you think a family making \$35,000 a year will be able to sustain a comfortable lifestyle in Teton County, Wyoming? What type of lifestyle would the same family have in Issaquena County, Mississippi?



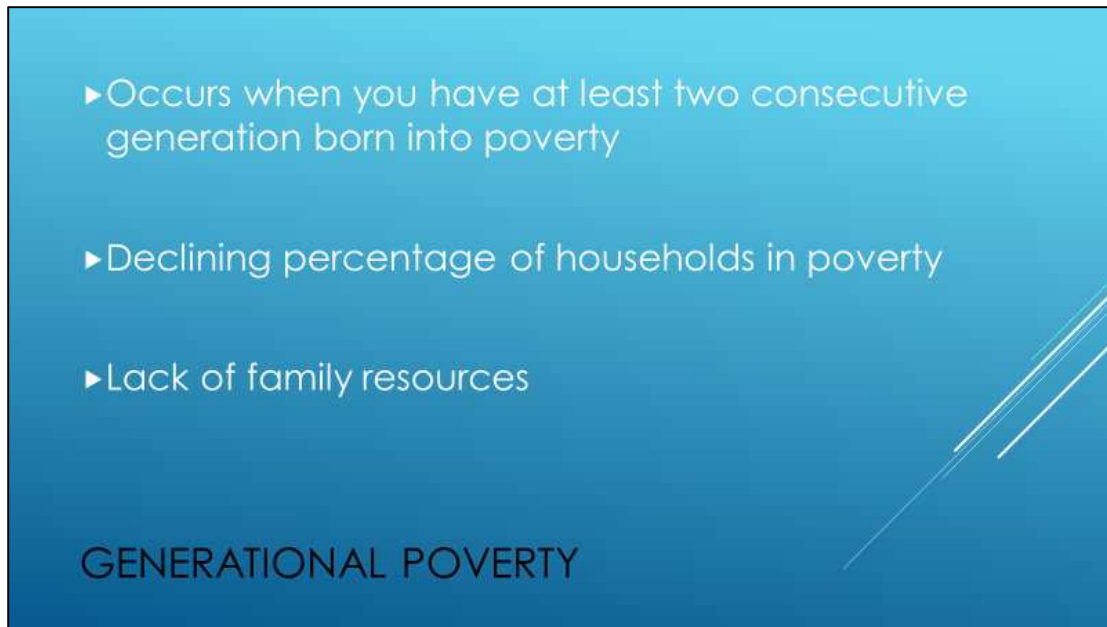
It is essential to understand that there are different types of poverty.

Awareness of each of these helps us to look towards ways of mitigating the effects.

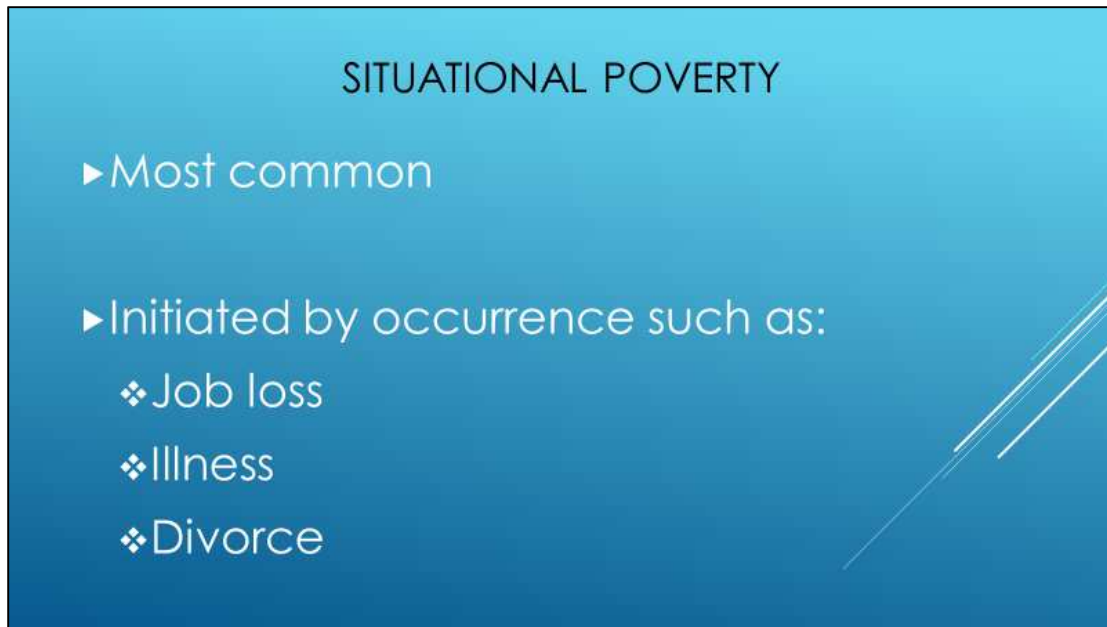
Poverty is generally broken down into six different classifications; absolute, generational, situational, relative, rural and urban. Some of these can be overlapping. Relative, situational and urban poverty could all describe the same family. As poverty is able to be identified under more than one classification, this is part of the reason that we cannot assume that a child of poverty has a comfortable, one-size-fits-all solution. The poverty situation can be just as diverse as the children and families that we serve.



Absolute poverty is probably one of the first ones that come to mind, though this is considered rare here in the United States (Chandy & Smith, 2014). This form of poverty is typically based on a complete lack of some aspect of basic human needs. These include, but are not exclusively limited too; food, clean water, education, shelter, or medical care. As these are clear, visible discrepancies that are typically reflective of apparent neglect on the local, state, and national level, these needs are addressed. Programs such as Medicaid, WIC, food stamps, free vaccinations at health departments, free/reduced lunch, Temporary Assistance for Needy Families (TANF) or Home Instruction for Parents of Preschool Youngsters (HIPPIY) help to address some of these needs. It is also important to recognize that while absolute poverty is considered rare in the United States, this cannot be stated globally. (World Bank, 2016)



The second type of poverty that may come up with is generational poverty. This form of poverty occurs when at least two consecutive generations are born into poverty (Sharkey and Elwet, 2011). For those working primarily in areas of the Southeastern United States, this appears to be a more commonly occurring scenario. Students in this category do not have the family resources to fall back on when attempting to break the cycle. Students find themselves being pushed further ahead educational than their parents or guardians, who find themselves unable to help or assist the children with their academics. Through educational guidance and support from teachers and local school districts, as well as programs such as Upward Bound who can focus on this group specifically, the support is provided to break this generational cycle.



Situational poverty is the most common type of poverty in the United States at this time. Situational poverty occurs when there is a sudden change within the household dynamic that adversely affects the financial situation (Jensen, 2009). Such occurrences as an unexpected loss of a job, an illness results in lost income, or divorce all can lead to situational poverty. In situations such as these, not child is not only faced with a myriad of additional stressors on top of the changes resulting from the loss of income.

### WHY IS SITUATIONAL POVERTY COMMON???

- ▶ Lack of available funds
  - ▶ Median savings account for individuals age 35-44 is \$5,000
  - ▶ Under the age of 35, the median amount falls to \$1,580
- ▶ Median Household Income is \$48,481

While the assumption of some individuals would be the reliance of the household to use available funds from savings to subsidize any remaining income, this is not the case. The average savings account for individuals age 35 to 44 is only \$5,000 (Smith, 2018). This figure drops down to \$1,580 for individuals under the age of 35 (Smith, 2018). When the average household income is \$48,481, or \$4,040 per month, this means that if something dramatic happens resulting in the significant loss of income, there are no funds available to meet basic needs. This form of poverty, while the one that most children will experience in their childhood, is the one that is typically the easiest to overcome. Through reemployment, a resolution to the illness, or shifts in the family budget, this type of poverty can be resolved and, the household placed back on stable financial footing.



Relative poverty is a broad stroke classification that encompasses individuals whose income are not sufficient to meet the demands of their geographical location average standard of living (Townsend, 1979). The true-life value of a dollar fluctuates significantly within the United States. Whereas a family income of \$100,000 per year would live comfortably in most rural areas of the Midwest, this would be insufficient to meet the needs of the same family in heavily urbanized areas such as New York, Atlanta, or San Francisco.





Is the value of a dollar the same everywhere? A dollar may be worth four quarters, ten dimes, or 20 nickels in the United States but that does not mean that it can purchase the same amount of goods or services. Here are a few samples pulled from across the United States at the grocery chain Kroger.

Atlanta, Georgia is a thriving metropolis within the Southern region of the US with an estimated population in 2017 of just over 486,000 in city limits and 5.88 million within the local metro. Jacksonville, Arkansas is a city of approximately 28,000 located 15 miles Northeast of Little Rock, Arkansas. Lastly is Connersville, Indiana is a rural community of almost 13,000 located 60 miles East of Indianapolis, Indiana. The four products that have been selected are identical and pulled from Kroger's website at the same time.

The price of one gallon of 2% milk and a pound of 80% lean hamburger deviate between all three regularly. For most families, these could be considered



staple items. Coke and the generic version, Cola, which should be considered a luxury item, do not deviate between the sites. As a side note, compare the cost between a 2-liter of generic cola at 77 cents, which also does not have to remain refrigerated, and a gallon of milk at \$1.99 to \$2.89, and does require refrigeration. When working on a limited budget, which one will go further?



Of course, when a person begins to ask when working on a limited budget, it sometimes seems cheaper to eat fast food than buying everything for a full meal. What if you were never taught how to cook a meal or that \$3.99 was just for a single pound of hamburger, not a bigger package? Alternatively, what if you do not have a refrigerator to store your food in because the hotel/rental your family is living in does not have one? Whether you recognize it or not, this is part of the situation that some of our children in poverty are living it.

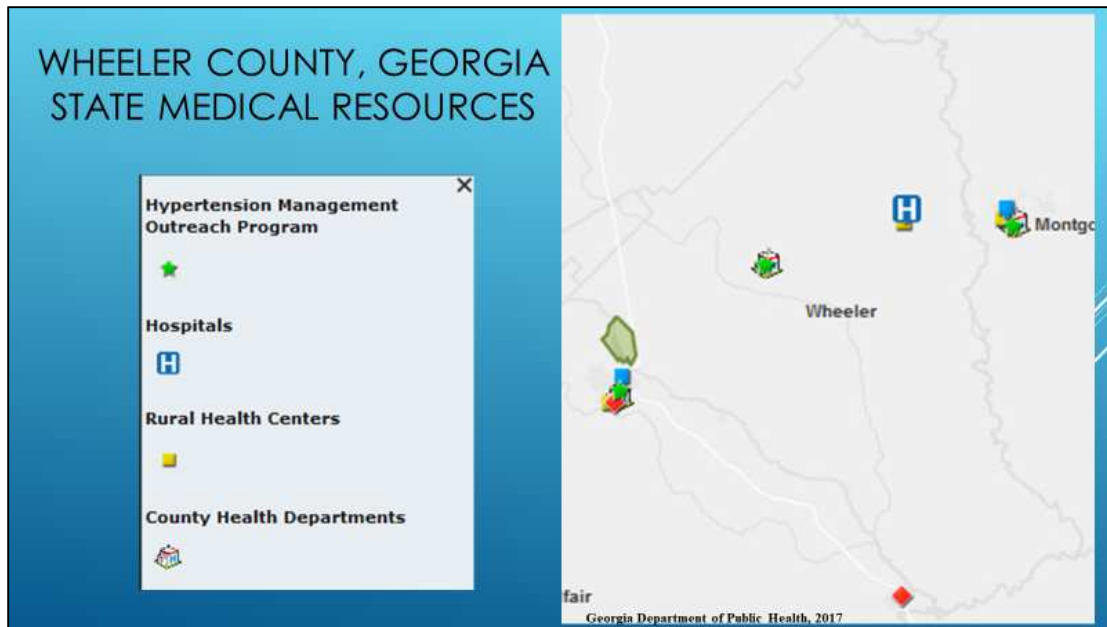


Here is a comparison of the average rent cost concerning two cities in the state of New York. These two locations are 334 miles apart physically. A one-bedroom apartment typically rents for \$3,757 per month. This monthly housing cost is near twice the Federal Poverty Guidelines itself. Alternatively, a one-bedroom apartment in Henrietta, NY only cost \$920, a shade under 25% of the one in Manhattan.

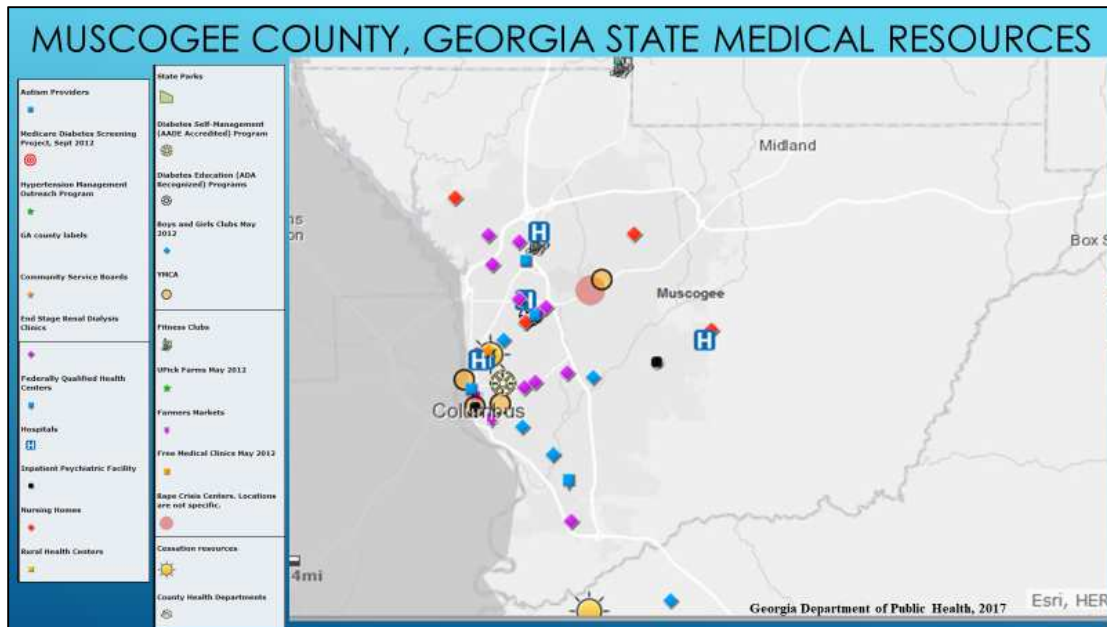
Is the value of a dollar the same everywhere? No, it is not. The cost of living differentiates depending on where one lives, what jobs are available, availability of housing, and proximity to other resources. A family that makes \$50,000 in the Hattiesburg, Mississippi metro area would need to make approximately \$87,000 to maintain the same standard of living in the Boston, Maryland metro area. It is imperative to recognize that family poverty cannot be defined by a singular number such as the Federal Poverty Guideline. It is almost entirely relative to the local area where a student lives.



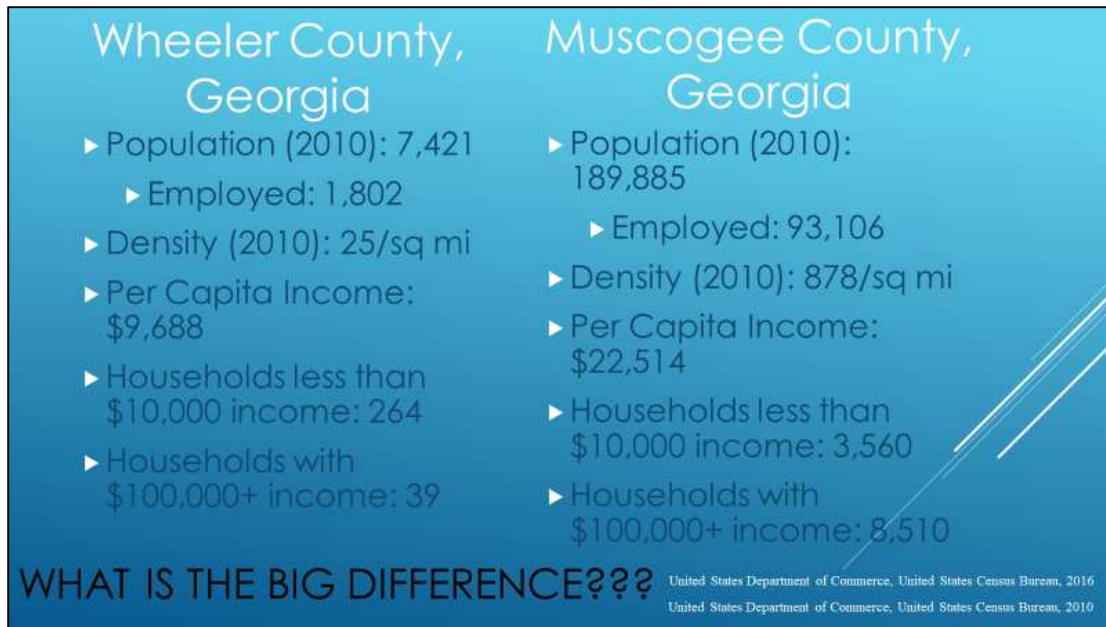
Rural poverty, which typically is 5% higher per population segment than urban poverty, results from a lack of available employment coupled with a lack of available government resources due to the remote location and lack of adequate funding due to low population density (Gurley, 2016; USDA-ERS, 2018).



One would naturally assume that areas that have a higher propensity of poverty would also have a higher availability of resources to address this problem. Alas, that is often not the case. All too often the situation arises that is contradictory to this notion. For example, let us look at Wheeler County, Georgia. According to the United States Census Bureau, this is the second poorest county in the United States using per capita income. Using a tool provided by the Georgia Department of Public Health (2017), we can see that Wheeler County has a minimal number of medical resources allocated to support the county. While the county is sparsely populated, the blunt issue arises that it is not financially sensible for state and federal government to spend money offering services that will be sparingly used. The tax base is nearly unseen resulting in faltering resources to offset the cycle of poverty.



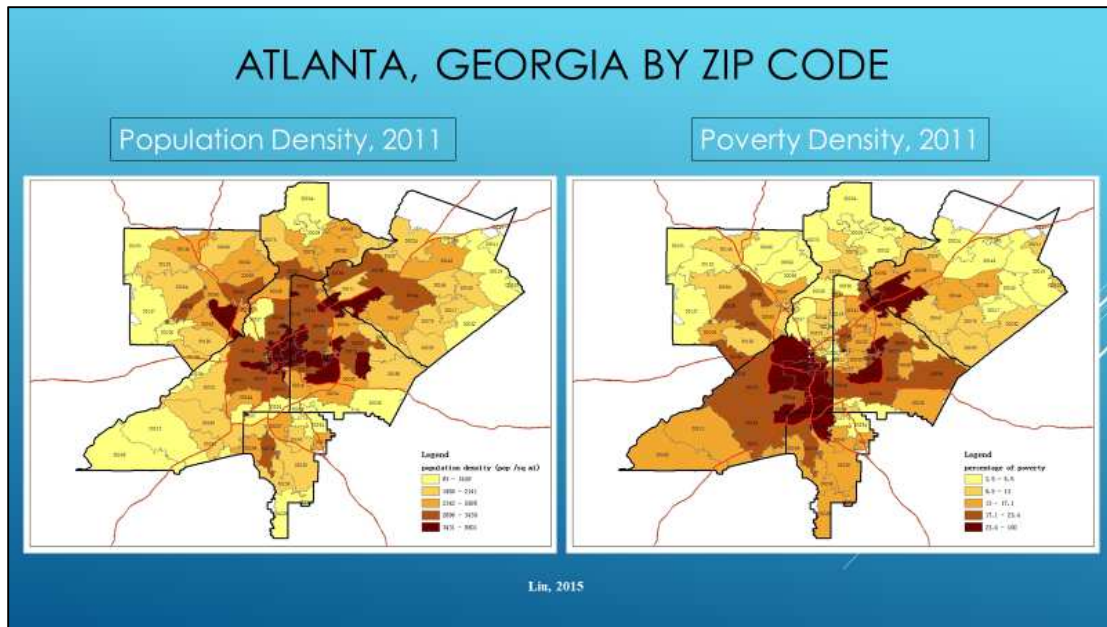
Muscogee County, Georgia is home to the town of Columbus and United States Army Base Ft. Benning. It is 150 miles west of Wheeler County but provides a plethora of additional resources that the county of Wheeler provides. It has a stable tax base, employment, and population that can sustain, and considered warrants, the medical resources necessary to meet the needs of the surrounding community.



A head-to-head comparison of Wheeler and Muscogee County paints the picture. While the population difference is drastic, stop to look at some of the other numbers. Compare the employment numbers of the two counties. Remember, the population count includes children. Compare the population density. (For those of you who do not remember, this is the number of individuals per square mile.) A health clinic in Wheeler that services a 100 square mile region will touch the lives of a fraction of the people that would cover the same amount of land in Muscogee. The last set of figures are the most disturbing. While the population ratio is 25:1, the ratio of households making less than \$10,000 is only 13 in Muscogee County to every 1 in Wheeler County (United States Department of Commerce, 2016). Even more telling is the ratio of household making more than \$100,000 income which is a staggering 218:1 (United States Department of Commerce, 2016).

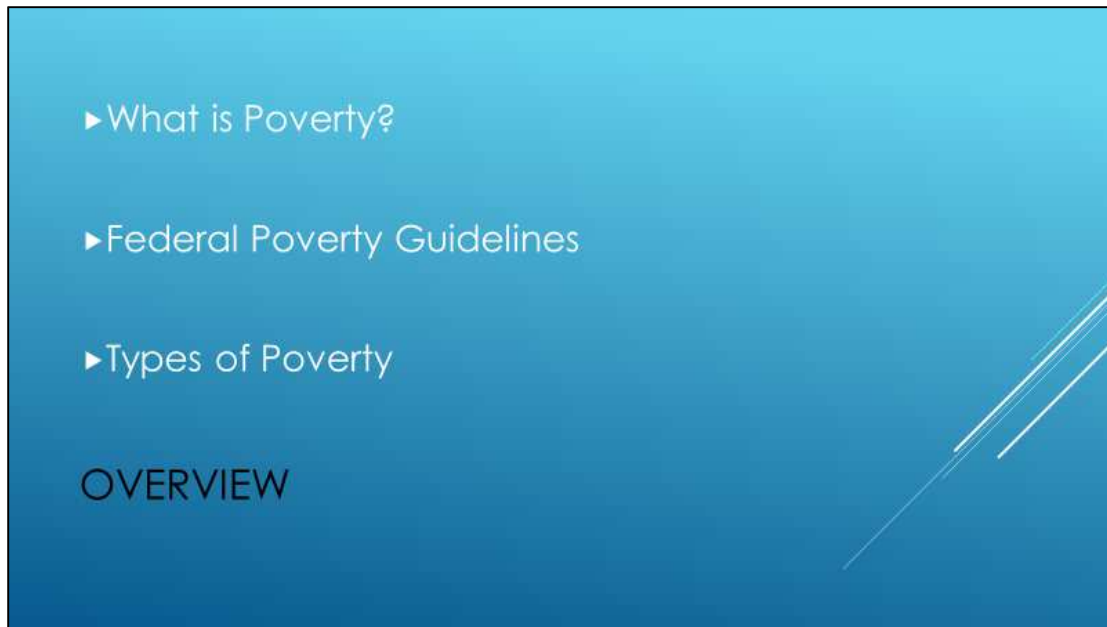


Urban poverty results in, and from, overburdened systems of support that are ill-equipped to deal with the demand of high numbers in a small geographical area as well as gentrification, increased levels of crime, or economic opportunities (Desmond, 2012; Ludwig, Duncan, & Hirschfield, 2001; Wu, Webster, He, & Liu, 2012).



It is not fair to believe that because there is a higher population density assures that resources will be available to offset the effects of poverty on our students. Often, the exact opposite can be the case of our students and their families that live in urban settings. Whereas with our rural families, the funding is not allocated because not enough individuals will be affected; our urban families receive lackluster support since the available resources are overburdened due to the excessive amount of need required in such a localized area.





It is understood that all of this is a lot to take in at one time. The goal of professional learning is not an attempt to make you an expert in the field. It is essential that you have a basic understanding of what poverty is. Look at the tentative definitions placed on the wall and think about what you and your peers have said. Hopefully, you are starting to get a little bit clearer idea of what poverty is in your understanding.

We then covered the Federal Poverty Guideline. Is this number a fair assessment to use across the board? Just as importantly, think about how this arbitrary number affects your students. Remember that their families may or may not be receiving services and assistance solely based on this amount. If you work in a community that is a bit wealthier, some of your students may be worse off because their households make more than this amount and are ineligible for this help. Does

that mean that they do not live in poverty because the money that their families make is worth less than other parts of the country?

Poverty is not relegated to a specific gender, ethnicity, race, or location. It does not have a singular face. When working with children in our schools and classrooms, we need to remember that children of poverty do not wear a particular shirt or even have specific documentation to identify them as such. The only way to know is to know your students.

#### Sources

- Georgia Department of Public Health. (2017). Online analytical statistical information system. Retrieved from <https://oasis.state.ga.us/oasis/oasis/HealthResourceCenter.aspx>
- Kennelly, B. A. (Photographer). (n.d.). *Exceptionalism at its best: 21 facts about the explosive growth of poverty in America that will blow your mind*. Retrieved from <https://www.sott.net/article/305537-Exceptionalism-at-its-best-21-facts-about-the-explosive-growth-of-poverty-in-America-that-will-blow-your-mind>
- Lin, Z. (2015). Map based Atlanta zip code study. Retrieved from <https://www.biggerpockets.com/blogs/6537/44400-map-based-atlanta-zip-code-study>
- Paying for Senior Care. (2018). 2018 Health & human services poverty guidelines/Federal poverty levels. Retrieved from <https://www.payingforseniorcare.com/longtermcare/federal-poverty-level.html>
- United States Department of Agriculture. (2017, February). *Official USDA food plans: Cost of food at home at four levels, U.S. average, January 2017* [Data file]. Retrieved from <https://www.cnpp.usda.gov/sites/default/files/CostofFoodJan2017.pdf>
- United States Department of Commerce, Bureau of Economic Analysis. (2018). *CA1 personal income summary: Personal income, population, per capita personal income* [Data file]. Retrieved from <https://www.bea.gov/iTable?reqid=70&step=1&acrd=70&step=30&isni=1&7022=20&7023=7&7033=-1&7024=non-industry&7025=4&7026=xx&7027=2016&7001=720&7028=3&7031=xx&7040=-1&7083=level&7029=20&7090=70>
- United States Department of Commerce, United States Census Bureau. (2018). *Small area income and poverty estimates (SAIPE)*. Retrieved from [https://www.census.gov/data-tools/demo/saipe/saipe.html?s\\_appName=saipe&map\\_yearSelector=2016&map\\_geoSelector=na\\_c](https://www.census.gov/data-tools/demo/saipe/saipe.html?s_appName=saipe&map_yearSelector=2016&map_geoSelector=na_c)
- United States Department of Commerce, United States Census Bureau. (2016). *DP03 Selected economic characteristics - 2006-2010 American community survey 5-year estimates* [Data file]. Retrieved from <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>
- United States Department of Commerce, United States Census Bureau. (2010). *DP-1 Profile of general population and housing characteristics: 2010 demographic profile data* [Data file]. Retrieved from <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

Appendix B

**Module 2**

# POVERTY 101: Helping Those That Can't Help Themselves

## Module 2

Bradford R. Stephens  
Bradford.Ray.Stephens@gmail.com

### Agenda

- ▶ Module 1: Background/Familiarization
- ▶ Module 2: Justification/Cognitive
- ▶ Module 3: Adjustment/Implementation

The agenda allows the participant to see the general overview of the entire professional learning series. Due to the overall quantity of the subject matter covered, it has been broken down into three modules.



This first activity will be heavily dependent on the training location/participants. It will begin by spending a few moments talking about my background, experiences in the world of education, and a short overview of what the professional learning session encompasses. After this, a group warm-up will occur with the following parameters:

- If working with a group that is well known amongst themselves, starting with a 5-minute warm-up to let everyone get going.

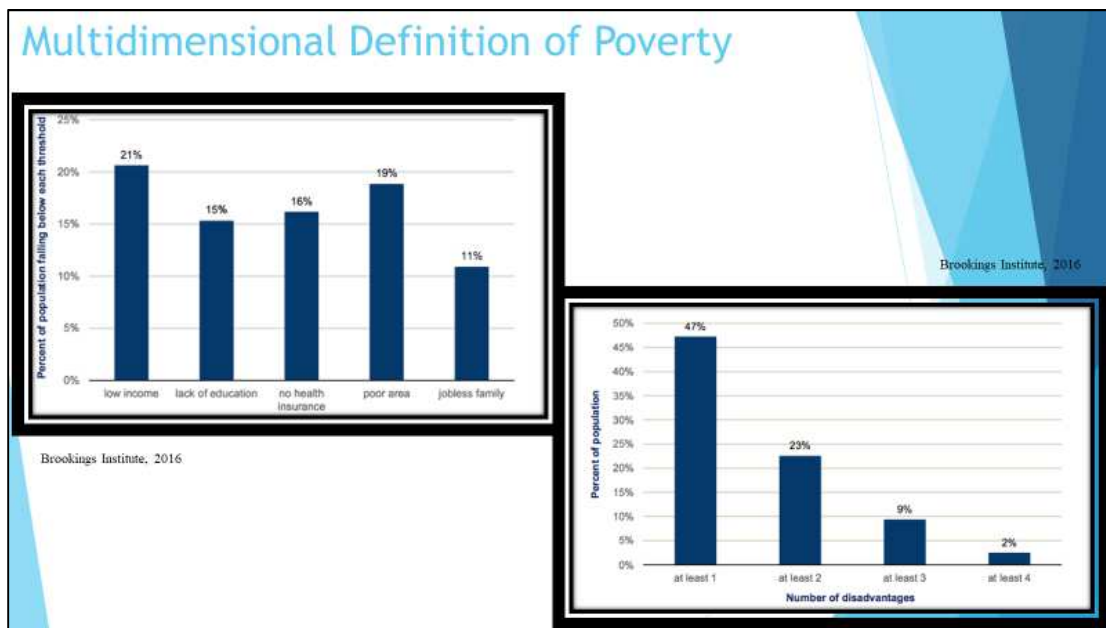
- If there are participants that are not typically part of the group or are new to the group (we all know how the novice or new-hires can feel at these training sessions), then a moment to allow everyone a brief introduction for all members.
- If the group is medium to large, then allow 5-10 minutes for everyone seated together to introduce themselves. Ideally, each group will be a diverse mixture of participants. During group discussion points, the broader the backgrounds and experiences of the participants in the group, the more effective the training will be.



The previous module helped to establish the different types of poverty. The only reoccurring theme that runs concurrently throughout all types of poverty is that the family structure, regardless of its form, is not able to financially meet the necessities of life. Primary among these food, shelter, clothing, education, and medical needs. I specifically use the word “need” as these are all required for basic

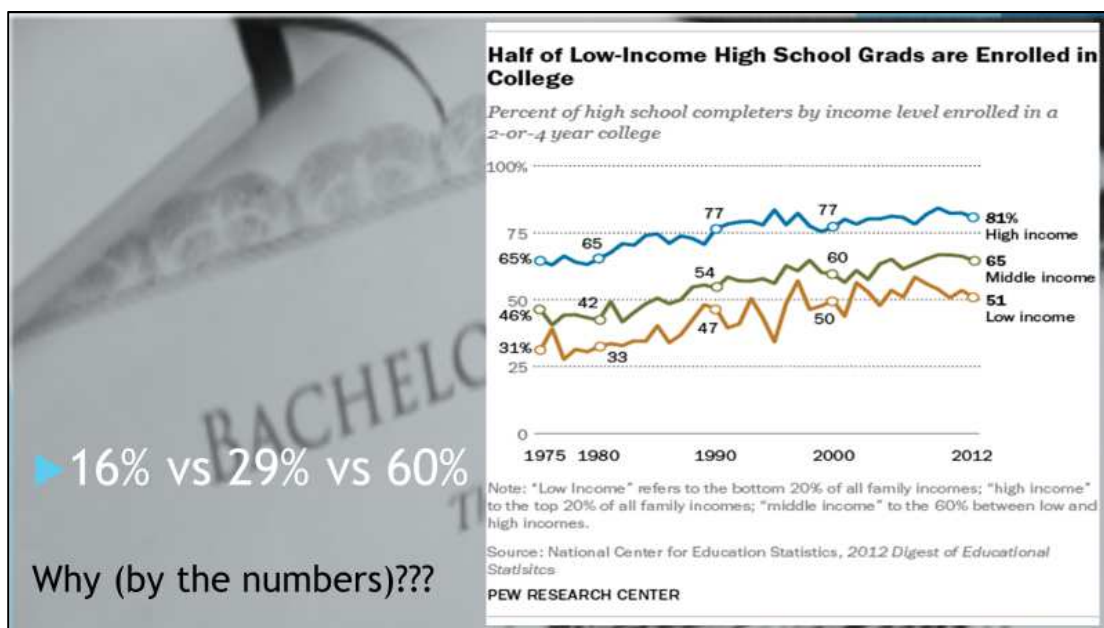
human survival. If you remove any of these, the quality and sustainment of life begins to decline dramatically.

As of 2016, the United States Department of Education (2018) estimated that nearly 1 in 5 children lives in poverty. One in every five children faces a daily situation where they may not know where they will sleep that night, have clean clothes to wear to school, or know where their next meal will come from other than at school. Children are born into poverty on a regular basis. This situation is not something that they selected or chose. Often, it is not something that their guardians want or have chosen.



There are many different aspects of the classification of poverty. One of the current themes is that poverty is not necessarily the result of any single factor but a result of a combination of different aspects that result in the overall aspects of poverty

as it is typically known. Research from the Reeves, Rodrigue, and Kneebone (2016) has modernized a concept from 1942 addressing the five primary components of poverty. By recognizing these areas; low income, lack of education, no health insurance, poor area, and joblessness, society can work towards addressing the needs to combat poverty. Just because a family structure has one of these disadvantages, it does not necessarily mean that they will be in poverty. It merely means that there is an increased opportunity for them to experience the effects of poverty. These become circular, and therefore, increase the opportunity for poverty to no longer be situational but generational.



Education is a stepping stone to breaking the cycle of poverty. Higher education lends towards better employment opportunities and, therefore, jobs that have higher pay and better benefits. Students that grow up in poverty are not

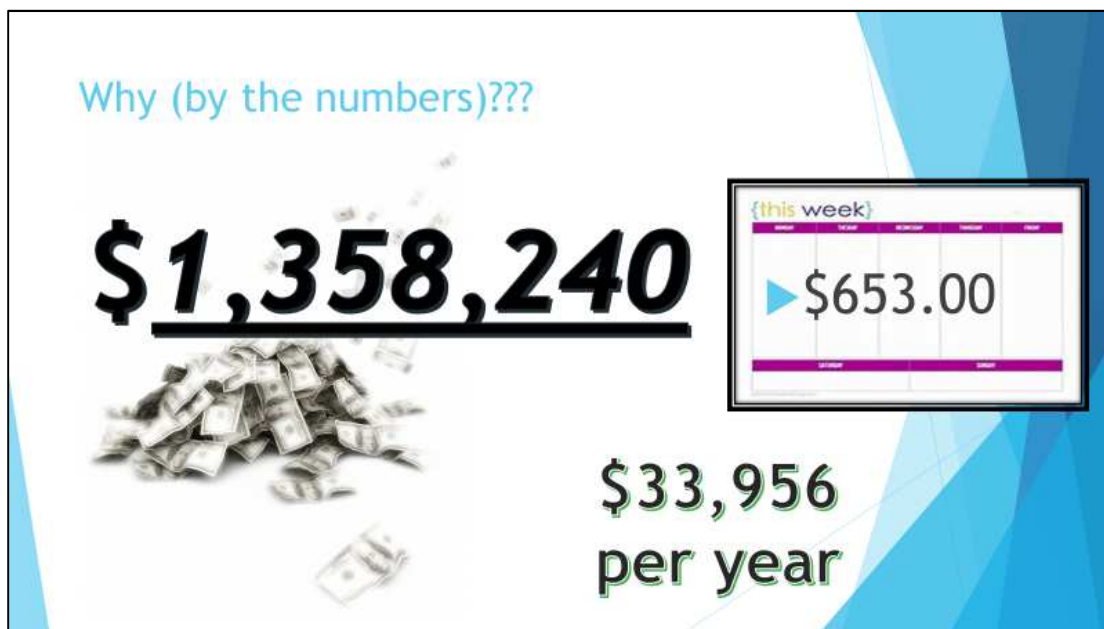


graduating at levels anywhere near their peers. Please note that while nearly 51% of low socioeconomic status (SES) graduates attend college, only 16% graduate with a bachelor's degree (USDE – NCES, 2015). These percentages are opposed to 29% of middle SES students who graduate and high SES graduates who are at a 60% rate (USDE – NCES, 2015). These numbers are more disheartening since 30% more high-income high school graduates attend college than low-income graduates (USDE – NCES, 2015). There are many different reasons and justifications for these numbers, none of which past the muster of equity for our students.

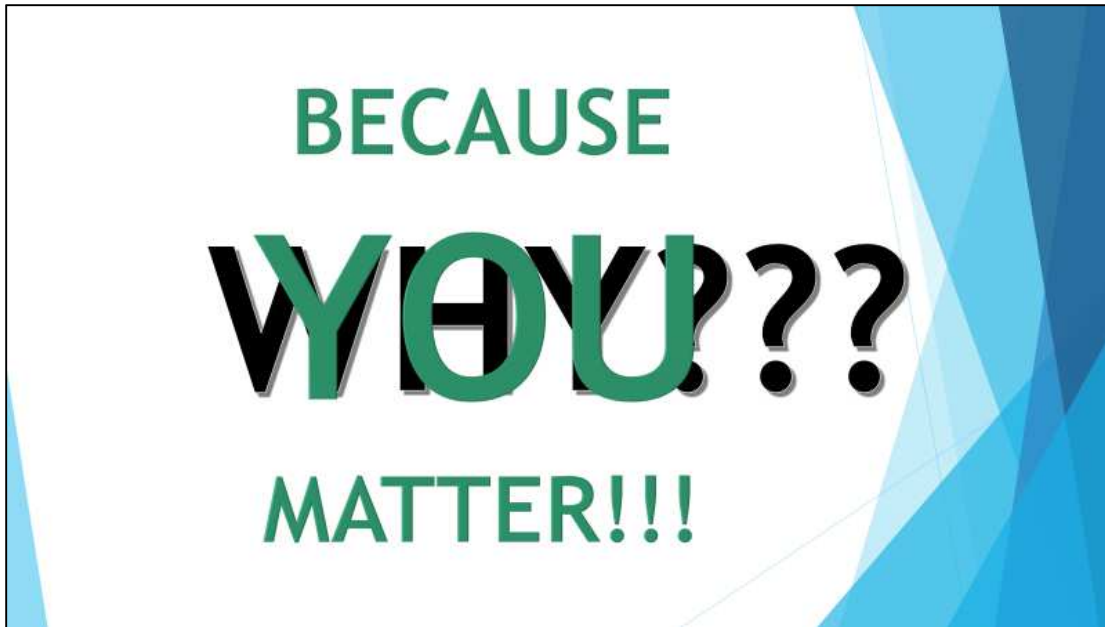


Higher education leads to greater job opportunities. An individual without a high school diploma is nearly three times as likely to be unemployed as someone with a bachelor's degree. An individual with a high school diploma is twice as like to find

themselves without an income as someone with a bachelor's degree (United States Bureau of Labor Statistics, 2018).



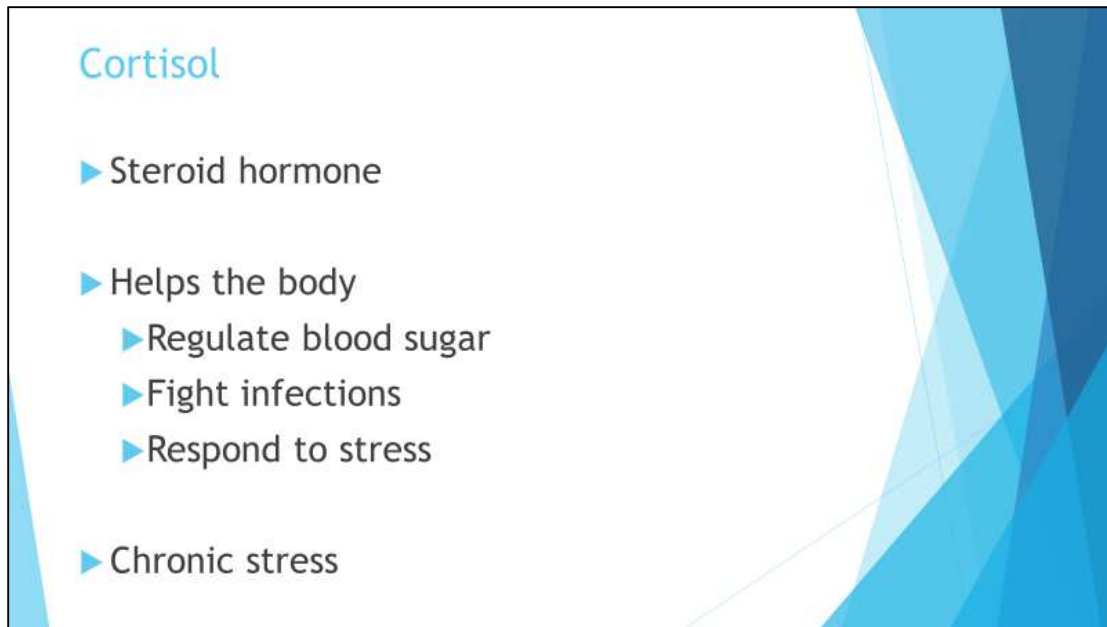
\$653. This amount is the difference in an average weekly paycheck between someone who does not complete high school and someone with a bachelor's degree (United States Bureau of Labor Statistics, 2018). This number equals out to \$33,956 over a year. To help put this in perspective, this is slightly more than the United States Poverty Guideline for a family of six. An individual that has not completed high school can expect to earn \$520 per week. This amount increases to \$712 per week for a high school diploma. Both pale in comparison to a weekly income of \$1,173 for someone who holds a bachelor's degree. Just for reference sake, the difference between less than a high school diploma and a bachelor's degree ends up being \$1,358,240 over a 40-year career.



All of this data paints a bleak picture for those students of poverty in our classroom. Plainly stated, without intervention, children of poverty can expect to not graduate from college, have nearly a three times greater chance of experiencing unemployment in their lifetime, and earn more than a million dollars less than their middle to higher socioeconomic peers over their lifetime. They will struggle to maintain a job, reside in an area that does not have adequate or appropriate resources available, work harder for less pay, and send their children to struggling schools. Their children will face the same challenges that they did, as will their children, and their children, generation after generation. However, there is an intervention available. Someone who interacts with these children understands these challenges and have the knowledge, training, and drive to make a difference. You.




Stop for a moment and think about your students that live in poverty. While they might not be as clearly defined as race or gender, most teachers that have spent an appropriate amount of time interacting with their students can identify which of their students come from a household that is poor and those that are not.



Why do students of poverty act in a certain way? Neurology has begun helping to answer this exact question. One of the primary reasons that people, not just children, of poverty act or behave a certain way is because of their cortisol level. Do not assume that all people will act the same way. Their backgrounds combined with other external and internal factors will result in their behavior. What can be stated is that cortisol has generalized effects on the mind, and therefore, the body and actions that take place as a result.

For general background knowledge, cortisol is a steroidal hormone that is released from the adrenal glands which are seated atop the kidney. The hypothalamus controls the adrenal glands. The hypothalamus is responsible for a substantial amount of our automatic nervous system functions and responses, such as body temperature, hunger, fatigue, thirst, sleepiness, and stress. In particular, cortisol helps the body

regulate blood sugar, fight infections, and respond to stress. Since this is an automatic response, many problems begin to ensue when there is chronic stress.



- Adam, E. K., Heissel, J. A., Hittner, E. F., Doleac, J. L., Meer, J., & Figlio. - *Adolescent cortisol responses to high-stakes testing in school-based settings*
- Giordano, A., Mondelli, V., Mehta, M. A., Williams, S., Pariante, C. M., & Dazzan, P. - *Assessing differences in the inflammatory markers between first episode psychosis patients and healthy controls: The importance of controlling for confounding factors*
- Isaksson, J., Lindblad, F., Valladares, E., & Högberg, U. - *High maternal cortisol levels during pregnancy are associated with more psychiatric symptoms in offspring at age of nine - A prospective study from Nicaragua*
- Kohrt, B., Hruschka, D., Kohrt, H., Carrion, V., Waldman, I., & Worthman, C. - *Child abuse, disruptive behavior disorders, depression, and salivary cortisol levels among institutionalized and community-residing boys in Mongolia*
- Laurent, H. K., Gilliam, K. S., Wright, D. B., & Fisher, P. A. - *Child anxiety symptoms related to longitudinal cortisol trajectories and acute stress responses: Evidence of developmental stress sensitization*
- Oberle, E. & Schonert-Reichl, K. A. - *Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students*
- Tene, O., Halleli, H., Korczyn, A. D., Shopin, L., Molad, J., Kirschbaum, C., Bornstein, N. M., Shenhar-Tsarfaty, S., Kliper, E., Auriel, E., Usher, S., Stalder, T., & Assayag, E. B. - *The price of stress: High bedtime salivary cortisol levels are associated with brain atrophy and cognitive decline in stroke survivors. Results from the TABASCO prospective cohort study*
- Vliegenthart, J., Noppe, G., van Rossum, E. F. C., Koper, J. W., Raat, H., & van der Akker, E. L. T. - *Socioeconomic status in children is associated with hair cortisol levels as a biological measure of chronic stress*


There is a substantial amount of research concerning cortisol and stress. A moderate amount of this research is specifically geared towards the effects of cortisol and children in the classroom. As one spends time looking through the research that is out there on this specific aspect of the topic, one theme seems to run concurrently; abnormal levels of cortisol have a correlative association with student behavior which can lead to a direct effect on educational achievement.





### Cortisol

- Sustained high levels of cortisol (such as chronic stress) can:
  - Impair thinking
  - Damage the heart
  - Cause high blood pressure
  - Lead to diabetes
  - Increase susceptibility to infection
  - Even cause early death

Henkin, 2015








High Cortisol Levels

Harvard University, 2018



High cortisol levels result from stress. Cortisol production is part of the body natural “fight, freeze, or flight” reaction for survival. This reaction certainly means that not all stress is negative and bad for the body. The increased blood flow from an elevated heartbeat results in more oxygen to the brain and other body systems in order to prepare for what will come. A problem begins to occur when this stress is sustained over a long period. The body is not physically designed to operate at high levels of cortisol production for a sustained time. Damage to the heart, increased chances of diabetes, and high blood pressure can result from sustained levels (Harvard University, 2018; Henkin, 2015).



One of the most amazing aspects of the human body is its ability to adapt to a situation. Unfortunately, this is not always for the best in the long term. General Adaptation Syndrome is the term given to a human’s adaptation to elevated levels of stress over long periods (West, 2015). You can observe the body’s resistance to stress, or cortisol level, change over time as the level of stress persists. While the body’s resistance to stress initially declines a small amount, eventually the body begins a stronger and more persistent production of cortisol in order to meet the perceived need due to the consistently elevated stress. As our body becomes more and more accustomed to the stress, the adrenal glands produce more and more cortisol to deal with the situation. Eventually, the body is no longer able to sustain the cortisol production and the body “crashes” as a result.





A roller coaster of high and low levels of cortisol and the body consistently attempts to increase cortisol production in order to meet the needs of continuous stress for the students followed by troughs of lows where the body and mind, which is still under stress, has not cortisol to draw upon to deal with the situation. The stress accumulates until there is a massive flow of cortisol since it is trying to make up for the earlier lack of production resulting in an even more significant amount produced in a shorter period. Once the high has been attained, then there is a sudden drop as production ceases. The individual comes crashing down, just like a roller coaster.

**Low cortisol - mental and emotional symptoms**

- Anxiety in stressful situations
- Depression in stressful situations
- Extreme moodiness
- Confusion, absentmindedness, especially in stress
- Poor resistance to stress,

West, 2015

**Low Cortisol Levels**

West, 2015

**Low cortisol - mental and emotional symptoms**

- Negativism
- Victimization
- Paranoid, quarrelsome, accusatory
- Frequent screaming or yelling
- Excessive emotions, outbursts of anger/anxiety, panic attacks
- Sharp verbal retorts, strong dramatized words

\*\*\* Remember - These effects are due to **adrenaline, high catecholamines, low blood sugar and inflammation**

The expectation of what an individual can expect when they hit bottom include anxiety, depression, moodiness, paranoia, excessive emotional outburst (West, 2015). Just as students are going to have a natural high when their cortisol levels are elevated, they can quite quickly change to reflect the low cortisol levels that result when the adrenal glands production are worn out.

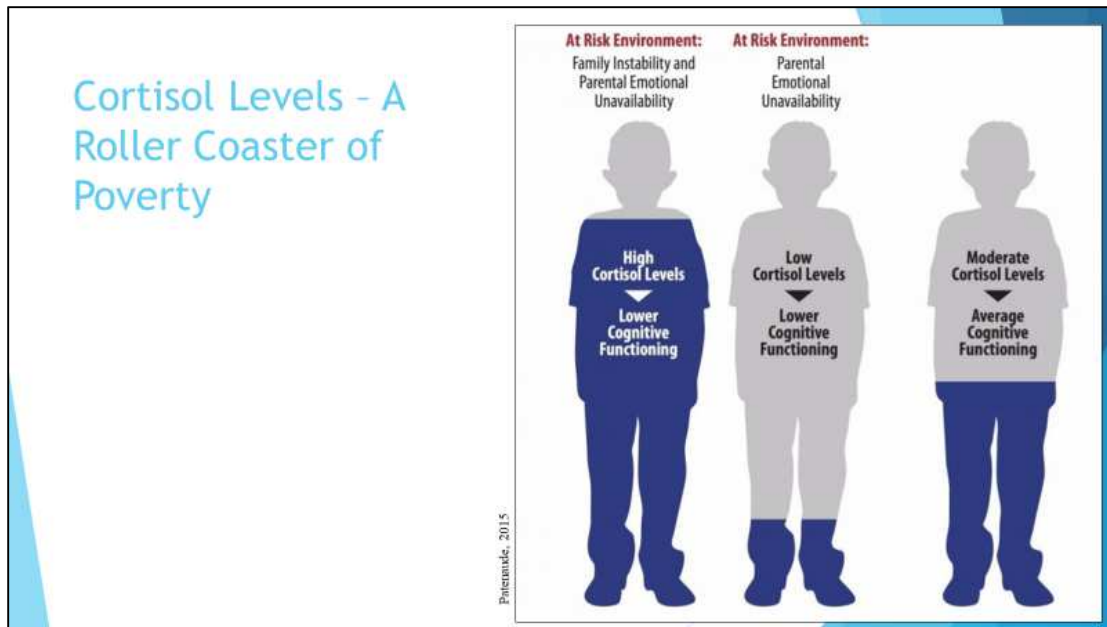
**Cortisol Levels - A Roller Coaster of Poverty**

HIGH CORTISOL LEVEL SYMPTOMS	LOW CORTISOL LEVEL SYMPTOMS
• High blood pressure	• Sugar & salt craving
• Fatigue	• Decreased sex drive
• Erectile dysfunction	• Anxiety
• Reduced sex drive	• Irritability
• Weakened immune response	• Bone & muscle loss
• Weight Gain	• Weight gain
• Hyperglycemia	• Depressed Mood
• Insomnia	• Insomnia
• Poor concentration/memory	• Fatigue

Zimmerman, 2014

Ironically enough, many of the outward indicators of high and low cortisol levels are the same (Zimmerman, 2014). Fatigue as the body cycles from an elevated heartbeat and preparation for what may come over a lengthen time to a drop in the cortisol level. Weight gain as the body requires additional calories to accommodate what it is expecting as a higher energy need over time. Insomnia since the body is in a constant flux concerning its need for awareness for self-preservation.

From an educational standpoint, symptoms are quite contradictory to the behaviors and actions viewed as necessary for academic success. Poor concentration/memory, anxiety irritability or depressed moods can all hurt student performance in the classroom. Students of poverty are under constant stress. Food, shelter, attention, support, and stability; you name it and these students deal with it on a minute-by-minute basis. They are on a constant roller coaster of cortisol production that is beyond their control resulting from the constant stress they experience.



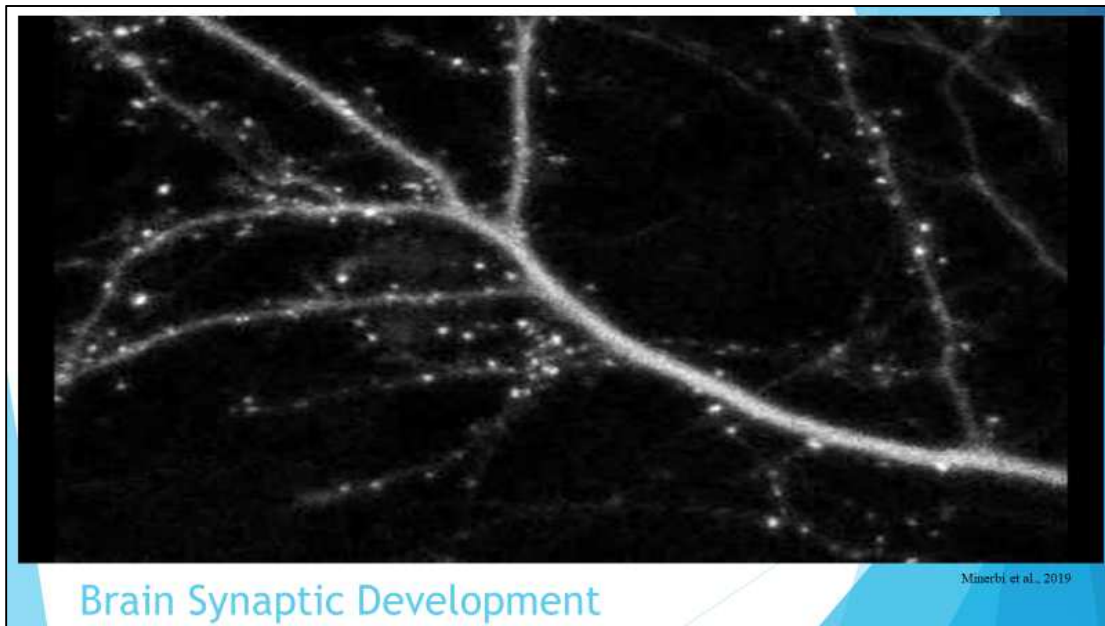
High or low, when dealing with cortisol levels, some symptoms can lead to negative repercussions in the classroom. As an educator, it is essential to recognize this issue because all students, especially those of poverty, are likely to experience elevated and decreased cortisol levels due to stress. Please note that we are not talking about short-term stress. Worrying about an upcoming test, whether or not someone is going to make a competitive team, or concerns that they do not have the latest and greatest cell phone is not going to result in the long-term effects that we have just discussed. The stress we are talking about persist consistently and, unfortunately, for most of our students is outside of their control. The stress levels we are discussing at sometimes referred to as toxic stress.



Another important aspect of our students is brain growth. With technological development, much research has taken place concerning the human brain (Gillespie, Best, & O'Neill, 2012; Meng, Deng, Wang, Guo, & Li, 2015). One of the specific areas has been concerning brain growth. Take a moment with those around you and discuss what you collectively know about how the human brain grows and develops.

One of the most natural comparisons for the human brain would be the development of the modern roadway system within the United States. Look at this map of the national highway system. There are major thoroughfares, in the way of the interstate system, supported by multiple national and state highways. These, in turn, are supported by smaller highways and local roads that seamlessly connect virtually every spot within the United States. As new areas of growth are developed and built, new roadways are constructed to connect these areas with the existing infrastructure

of the United States. This progression of development is quite similar to the human brain.

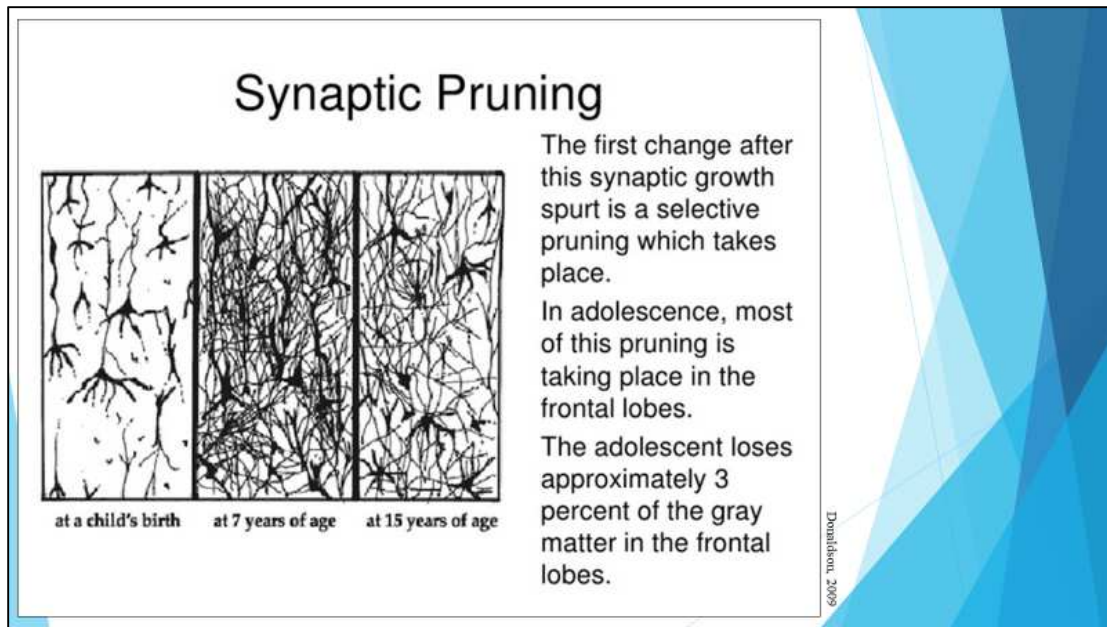


The human brain sustains and expands through synaptic development (Minerbi et al., 2019). As information and knowledge, in the form of electrical impulses, traverse throughout the brain, the neurological pathways strengthen to support the usage. As can be seen in this video, as there are greater exposures and use of the various portions of the brain, growth occurs to accommodate the learning. New synaptic growth results in the brain expanding in order to contain, and recall, what has been learned. The more times a task is accomplished, or knowledge is presented and then recalled for use, the more times that a particular synapse is used, and the brain naturally adapts by eventually creating a stronger, more permanent connection to the location.

As previously stated, compare this to our roadway system. What may start as a small, two-lane road eventually is upgraded to a smoother two-lane highway as more homes are built in the local area. More roads are added from either side to accommodate the growth. Eventually, the two-lane highway is upgraded to a four-lane highway because of the growing influx of traffic. This growth results because of the additional roadways that are being built around it and are supported because of it. If growth continues, eventually it will be developed into an interstate to handle the massive amount of traffic that occurs.

Our brains work in the same fashion. The nerve impulses, the traffic, that traverses our neurological pathways, the roadways, are looking for the final destination in the brain. When these roadways are not adequately developed or present, the brain does the best that it can to place, or recall, the information. For our youth, this should result in the proper growth and development of the brain.





Unfortunately, our brains do not continue to grow and develop at the same rate throughout our lifetimes. Just as some of us remember “growing pains” during our pre-adolescence years when it seemed that our parents needed to purchase us new clothes every six months as we grew out of them; the growth slowed as we aged into puberty and later stopped as a whole. The same process occurs with the brain, though on a slightly quicker schedule.

The human brain is born with a limited number of neurological pathways. This minimal number of connections would make sense as they have had minimal exposure to any outside stimuli or knowledge. Available resources of nutrition and energy must be spent on the development of functional systems that will allow the infant to survive once being born. Once they enter the world, they are exposed to a massive amount of knowledge and information. The brain immediately begins to



operate at full capacity with the synaptic growth occurring at a phenomenal speed to accommodate the required growth from all of the new stimuli.

A child's brain over-produces synapses early in their life. It does this in order to provide flexibility for later specialization within a child's life. Beginning at puberty, and continuing through the mid-twenties, the brain begins a natural pruning process of eliminating the synapses that are not being used. Current estimates run that an adult will lose nearly 50% of the synapses that they possessed before puberty. It takes energy to maintain these synapses and, the body has better use for this resource than to squander it on areas of the brain that are not being used. As sustainment and development occur in the primary pathways that are used repetitively, the areas that are not accessed essentially die off (Donaldson, 2009).



Our story of the growth of a small two-lane road to an interstate works well if the area continues to see growth and development. Unfortunately, that is not always the case. Not every road can become an interstate and, when this happens, the small towns along the way are typically lost as well. The same can be said for the information that lies along the neurological pathways that eventually die from not being used. Yes, we are talking about lost knowledge. Memories of childhood that lay dormant and eventually are culled from the mind. Alternatively, more relevant to teachers, information that was taught once or twice and never again visited. Yes, a student may have been taught something in the past but, unless it is used again or revisited, there is the definite chance that the information has been lost along the way.



This cognitive development is where chronic, toxic stress becomes so detrimental to our students. During the years when their brains are still developing at

an exponential growth rate through the beginning of the pruning process, stress is working against them. Toxic stress inhibits the proper development of synapses within the brain (Gnanendran, 2016; Harvard University, 2018). Fewer connections are created, limiting the growth and eventual development of the significant neurological pathways for the information to travel. As seen in the right picture, cases of extreme neglect can lead to brain shrinkage.

Since the brain will have limited areas of growth, new information will not be easily retained as their peers. There are also problems associated with memory recall since the brain must facilitate the placement of information in parts of the brain not generally associated with said data. Imagine doing a disk clean-up on your computer to make it run quicker only to find out that parts of the hard drive are not accessible. This lack of available pathways is what is happening to children whose brains are not developing to their fullest capacity due to toxic stress.

The pruning process will still occur during puberty. The problem ensues that since fewer synapses have been created and maintained during childhood, the culling process will result in pathways being removed that would typically be considered necessary for adequate brain function.



To say that most of our students have a lot going on in their life is an understatement in today's age. While we would like to say that they have control over their future, the current situation that they live in typically is an above average predictor of how their life will turn out. Children of poverty face an uphill battle to achieve a quality of life as compared to their middle- and higher-income peers. Less success in college, higher unemployment and, smaller paychecks are all earmarks of children of poverty. These children are our students. They deal with high levels of stress continuously which turns into a roller coaster of cortisol that wreaks havoc on their minds and bodies. Chronic stress becomes toxic stress that is harmful to their brains. Brain function is diminished as synapses are not adequately developed in their pre-adolescent years. This lack of synapses leads to more problems later on as the brain naturally begins a culling process starting in puberty, reducing the available neurological pathways that provide for a smooth flow of information in the brain.

Students of poverty end up not thinking the same way as their peers. Not only do they have to worry about where their next meal will be, if they will be made fun of because of dirty and unfashionable clothes, or if they will be able to attend school because they have to work, they have to deal with the fact that their brains are being forced to work harder to recall information that may have been lost. This cognitive fatigue is a perilous situation for our poor children. The good news is that you, as an educator, can help. You matter!

## Sources

- Adam, E. K., Heissel, J. A., Hittner, E. F., Doleac, J. L., Meer, J., & Figlio, (2017, September). Adolescent cortisol responses to high-stakes testing in school-based settings. *Psychoneuroendocrinology*, 83(supplement), 85. doi.org/10.1016/j.psyneuen.2017.07.465
- Donaldson, R. (2009, August 13). *Adolescent brain development and its effects* [PowerPoint slides]. Retrieved from <https://www.slideshare.net/nationalsafeplace/adolescent-brain-development-and-its-effects>
- Giordano, A., Mondelli, V., Mehta, M. A., Williams, S., Pariante, C. M., & Dazzan, P. (2018, April). Assessing differences in the inflammatory markers between first episode psychosis patients and healthy controls: The importance of controlling for confounding factors. *Schizophrenia Bulletin*, 44(suppl 1), S118. doi.org/10.1093/schbul/sby016.290
- Gnanendran, V. (2016, May 5). Three years and a lifetime [web log comment]. Retrieved from <https://aidunplugged.wordpress.com/category/violence/>
- Harvard University. (2018). *Toxic Stress*. Cambridge, MA: Center on the Developing Child
- Henkin, P. (2015). *Chapter 9: The endocrine system* [PowerPoint slides]. Retrieved from <https://slideplayer.com/slide/3448999/>
- Isaksson, J., Lindblad, F., Valladares, E., & Högberg, U. (2015, December). High maternal cortisol levels during pregnancy are associated with more psychiatric symptoms in offspring at age of nine – A prospective study from Nicaragua. *Journal of Psychiatric Research*, 71, 97-102. doi.org/10.1016/j.jpsychires.2015.09.016
- Kohrt, B., Hruschka, D., Kohrt, H., Carrion, V., Waldman, I., & Worthman, C. (2014, June 3). Child abuse, disruptive behavior disorders, depression, and salivary cortisol levels among institutionalized and community-residing boys in Mongolia. *Asia-Pacific Psychiatry*, 7(1), 7-19. doi.org/10.1111/appy.12141
- Laurent, H. K., Gilliam, K. S., Wright, D. B., & Fisher, P. A. (2015). Child anxiety symptoms related to longitudinal cortisol trajectories and acute stress responses: Evidence of developmental stress sensitization. *Journal of Abnormal Psychology*, 124(1), 68-79. doi.org/10.1037/abn0000009
- Minerbi, A., Kahama, R., Goldfeld, L., Kaufman, M., Marom, S., & Ziv, N. (2009, June 23). Long-term relationships between synaptic tenacity, synaptic remodeling, and network activity. *PLoS Biology*, 7(6), e1000136. doi.org/10.1371/journal.pbio.1000136
- Nehmad, L. (2009, February 9). *The biggest roller coaster drop in the world!!* [Video file]. Retrieved from <https://www.youtube.com/watch?v=5aF7dgWvQ6Y>

## Sources

- Oberle, E., & Schonert-Reichl, K. A. (2016, June). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30-37. doi.org/10.1016/j.socscimed.2016.04.031
- Patanade, M. (2015, June 18). Stress in low-income families can affect children's learning. *University of Rochester Newscenter*. Retrieved from <http://www.rochester.edu/newscenter/stress-in-low-income-families-can-affect-childrens-learning-108182/>
- Reeves, R., Rodrigue, E., & Kneebone, E. (2016). *Five evils: Multidimensional poverty and race in America*. Washington, DC: The Brookings Institute.
- Tene, O., Hallevi, H., Korczyn, A. D., Shopin, L., Molad, J., Kirschbaum, C., Bornstein, N. M., Shenhar-Tsarfaty, S., Kliper, E., Anriel, E., Usher, S., Stalder, T., & Assayag, E. B. (2018, August 23). The price of stress: High bedtime salivary cortisol levels are associated with brain atrophy and cognitive decline in stroke survivors. Results from the TABASCO prospective cohort study. *Journal of Alzheimer's Disease*, 1-11. doi.org/10.3233/jad-180486
- United States Department of Education, National Center for Education Statistics (USDE – NCES). (2013). *Digest of education statistics, 2012*. Washington, DC: USDE – NCES.
- Vliegenthart, J., Noppe, G., van Rossum, E. F. C., Koper, J. W., Raat, H., & van der Akker, E. L. T. (2016, March). Socioeconomic status in children is associated with hair cortisol levels as a biological measure of chronic stress. *Psychoneuroendocrinology*, 65, 9-14. doi.org/10.1016/j.psyneuen.2015.11.022
- West, R. (2015). *Adrenal fatigue and other hormones* [PowerPoint slides]. Retrieved from <http://slideplayer.com/slide/3393499/>
- Zimmerman, B. (2014, September 9). Ravaged by stress? Tips on how to reduce cortisol. [web log comment]. Retrieved from <http://beyondgoodhealthclinics.com.au/how-to-reduce-cortisol/>

Appendix C

**Module 3**



# **POVERTY 101: HELPING THOSE THAT CAN'T HELP THEMSELVES**

## **Module 3**

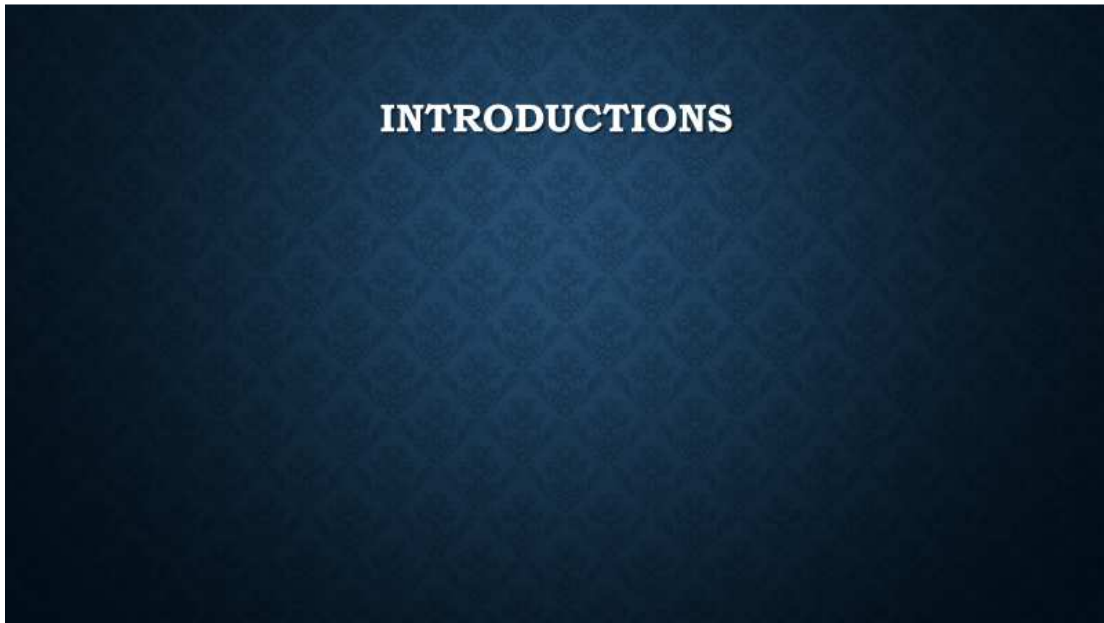
Bradford R. Stephens  
Bradford.Ray.Stephens@gmail.com

### **AGENDA**

- Module 1: Background/Familiarization
- Module 2: Justification/Cognitive
- Module 3: Adjustment/Implementation



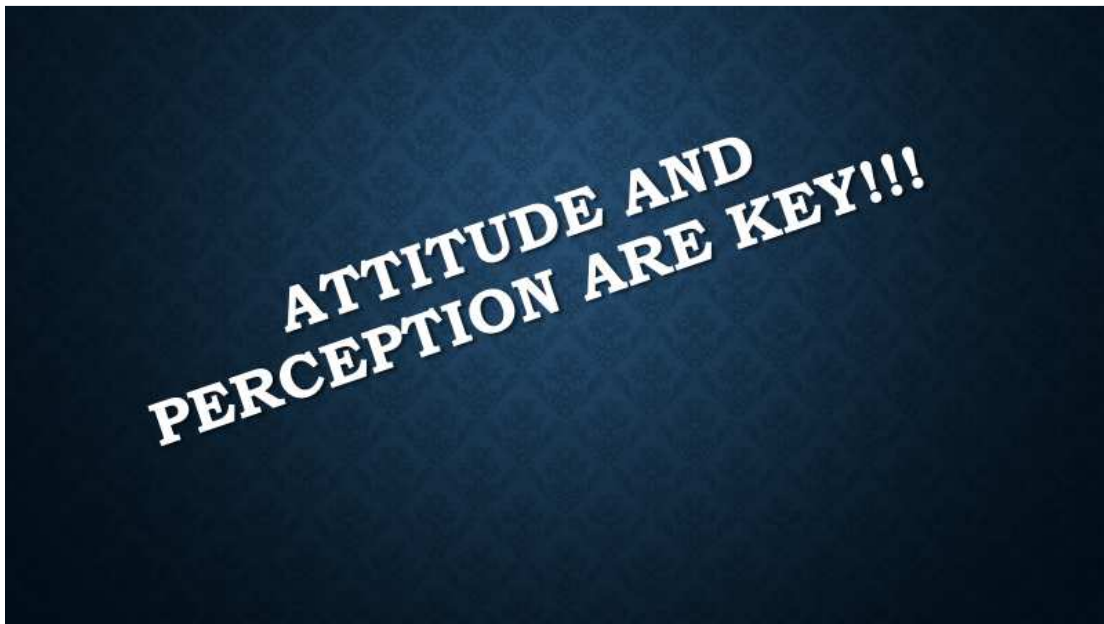
The agenda allows the participant to see the general overview of the entire professional learning series. Due to the overall quantity of the subject matter covered, it has been broken down into three modules.



This first activity will be heavily dependent on the training location/participants. It will begin by spending a few moments talking about my background, experiences in the world of education, and a short overview of what the professional learning session encompasses. After this, a group warm-up will occur with the following parameters:

- If working with a group that is well known amongst themselves, starting with a 5-minute warm-up to let everyone get going.

- If there are participants that are not typically part of the group or are new to the group (we all know how the novice or new-hires can feel at these training sessions), then a moment to allow everyone a brief introduction for all members.
- If the group is medium to large, then allow 5-10 minutes for everyone seated together to introduce themselves. Ideally, each group will be a diverse mixture of participants. During group discussion points, the broader the backgrounds and experiences of the participants in the group, the more effective the training will be.



Welcome to the final module of poverty training. The first two modules have covered everything from the classification and description of what is considered poverty through why addressing poverty is necessary and some of the cognitive and physical reasons that children of poverty are different from their middle and higher socioeconomic status (SES) peers. All of this adds up to the fact that low SES

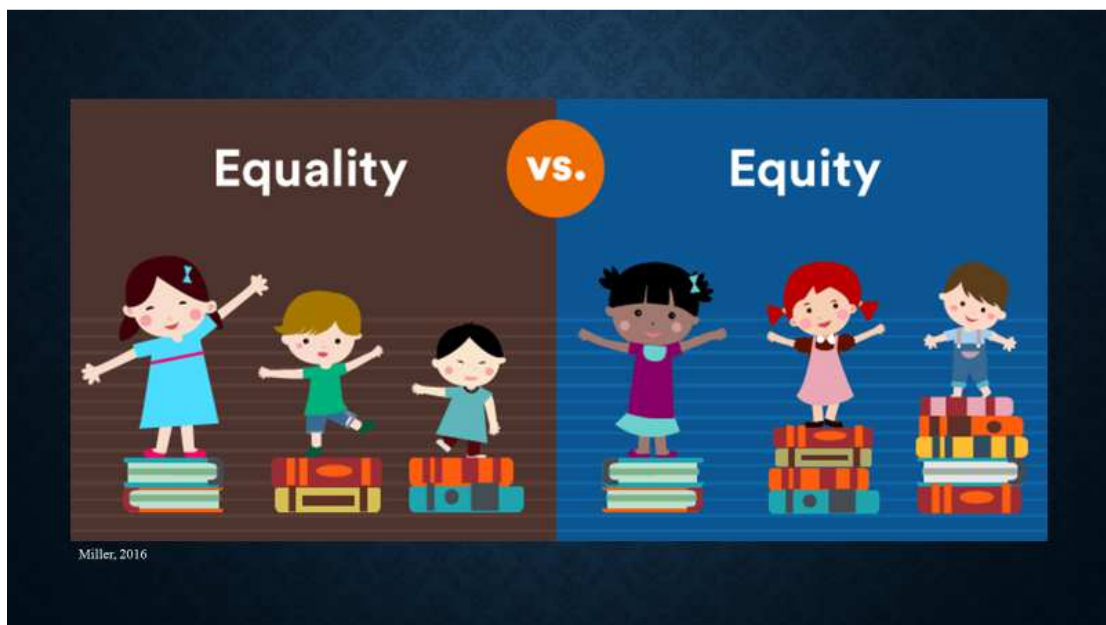
students are a diverse sub-section of the student population. Therefore, attitude and perception are crucial in the classroom. It is vital that you, as an educator, understand these facts and take them into account when dealing with these students. Fortunately, this does not necessarily require substantial changes from what is typically recognized as good classroom teaching.



The first element to understand is that pedagogy is instrumental. Research supports the theory that students that have the highest level of success are in classrooms of effective educators (Alton-Lee, 2003; Borman & Kimball, 2005; Goldhaber, 2016). The educational theories that are practiced with diligence in the classroom result in students that learn. Every student in the classroom is capable of learning. This opportunity for learning does not change because a student comes from poverty.



Participants will begin by examining their understanding of the difference between equity and equality.



Equality is providing everyone the same allowances, regardless of their needs. Some of our students already have access to the basic needs and education that you are presenting in the classroom. They have pencils, paper, books, computers or Wi-Fi readily available. By providing a pencil and paper to them to do their work, are you enhancing or improving their educational environment? The answer is undoubtedly no.

Treating all students in the classroom the same is a form of equity. We chose to believe that by treating all the students the same, we are giving all of them the same opportunities. This is not true. This imbalance highlights the importance of equity. Equity is providing what is needed to even the playing field. When we ask our students who need a pencil and paper and provide those that ask for them the necessary supplies, we have now started treating children differently. There is no equality but, there is now equity. This evening of the classroom environment is what we must seek in the classroom.

As educators, we need to look around and see how we can even the playing field for our students. Rather than concerning ourselves with making sure that everyone is being treated the same, we need to look at our students and determine what we need to do in order to put them all on the same playing field. This equalization in the classroom is difficult because we do not want to lower the standard for all but instead find a way to raise our students who need the help the most up to that of their peers. Students of poverty background and current financial

situation do not allow them access to experiences and materials that others around them have.



Think about the topic of school lunches as it relates to equity and equality. Take a moment to consider the topic and discuss among those at your table your thoughts. Select a spokesperson to give a brief synopsis of the table's opinion to the group of a whole

Field trips are an outstanding example concerning the concept of poverty, equity, and equality. The districts that I have worked with in the past would send a sack lunch for each student on the trip. This solution is understandable since attempting to take a lunch count and adjust for the prepared meal on the short time frame before the group leaves is not conducive for anyone involved. As a district, they do not want to find themselves in the situation where a student had previously

stated they would bring their lunch and then suddenly find out that a student is without a meal and cannot provide one. Telling students that they are not allowed to bring a lunch is not necessarily realistic given specific dietary restrictions and allergies with today's students. The district can clearly state that they are providing equality because every student is being provided a meal. While this may be true, is equity being provided to all students? A valid claim could be that it is not. Students who bring their lunch now have an extra meal as opposed to those that could not afford to provide their own lunch. The good news for our hungry students is that there will be extra meals available for them to eat. I speak from firsthand knowledge as I have seen this happen not only at districts that I have worked at but other districts that my children have attended.



**EDUCATIONAL EQUALITY CANNOT  
BE ACHIEVED WITHOUT FIRST  
HAVING EDUCATIONAL  
EQUITY**



One of the goals of a school district should be to provide an education to all their students. This education is offered equally to these students. The problem is that differences in students' backgrounds, which is often molded by their socioeconomic status, results in a massive variation in what they need educationally. Each student needs to be looked at holistically and individually to determine what these needs are. By addressing these needs, strengths, shortfalls, and desires, guidance can be provided to create an optimal scenario for their educational growth. These plans are not going to be the same. Some students are going to need less, and some are going to need a lot more than their peers. Equity helps to create an environment where all students are on the same playing field. Educational equality cannot be achieved without first having educational equity.





Poverty is not something that a student deals with outside of school. A parent is not able to ignore their socioeconomic status outside of their child's education. The state of their lifestyle often dictates the mindset and attitudes of the children in our classroom. Poverty is a way of life. Our students and their families have not chosen to live like this. Life choices, unforeseen circumstances and happenings outside of their control often combine to result in poverty. This situation does not mean that these families want to live in poverty. More often than not, they are not in a situation, have the education, or the opportunity to make choices to change this fact. Our students cannot just leave these facts behind when they come to school. They have stress as a result. Wondering where they will be sleeping that night to whether they will have food for supper or if they will have heat when they get home are all valid concerns for these students. These real-world circumstances are in addition to the issues of not having brand name clothes, not being invited to a birthday party or able to attend to having supplies for an assigned project or getting assistance for a homework assignment that they do not understand. Poverty is life for these students and permeates everything they do and how they think.



A coat. How many of you out there have worked for a district that collects them for “needy” students? I use that term specifically because it is still used. Are they needy? Is it fair to use this term when often, the families cannot afford coats? Do you think that these parents and guardians tell themselves that it is okay for their children to go to school in cold and freezing weather without a coat? I would hope that everyone here recognizes this is not the case.

From a personal standpoint, I remember a time when I was in junior high and left my coat behind at a school that we were at for an athletic event. I served as a manager and traveled to other schools as a result. Concerns of whom I would need to call to pick me up when we got back along with being hungry from not having supper lead to me forgetting my coat. A coat in January is a pretty important item, especially when you live in Indiana. I was freezing during the hour-long bus ride back to the school and made excuses to everyone why I did not have a coat. The coat was

second-hand to start with because my mother could not afford a new coat. I went for a coat for nearly a week before my mother confronted me about it. I knew she could not afford another one and did not want her to ask anyone for help because it seemed like it was the only thing that she ever was doing. I did not want to be one of “those” kids. I would rather suffer than lose the one thing that I felt like I had left, which was my pride. It may just be a coat but what can it represent to a child whose family cannot afford one? How many students do you see running around in freezing weather in clothes that are not appropriate for the weather? It may not seem to bother them but at what cost?

### HOW MANY JOBS???

Persons in Household	48 Contiguous States and D.C. Poverty Guidelines (Annual)							
	100%	133%	138%	150%	200%	250%	300%	400%
1	\$12,140	\$16,146	\$16,753	\$18,210	\$24,280	\$30,350	\$36,420	\$48,560
2	\$16,460	\$21,892	\$22,715	\$24,690	\$32,920	\$41,150	\$49,380	\$65,840
3	\$20,780	\$27,637	\$28,676	\$31,170	\$41,560	\$51,950	\$62,340	\$83,120
4	\$25,100	\$33,383	\$34,638	\$37,650	\$50,200	\$62,750	\$75,300	\$100,400
5	\$29,420	\$39,129	\$40,600	\$44,130	\$58,840	\$73,550	\$88,260	\$117,680
6	\$33,740	\$44,874	\$46,561	\$50,610	\$67,480	\$84,350	\$101,220	\$134,960
7	\$38,060	\$50,620	\$52,523	\$57,090	\$76,120	\$95,150	\$114,180	\$152,240
8	\$42,380	\$56,365	\$58,484	\$63,570	\$84,760	\$105,950	\$127,140	\$169,520
Add \$4,320 for each person over 8								

Paying for Senior Care, 2018

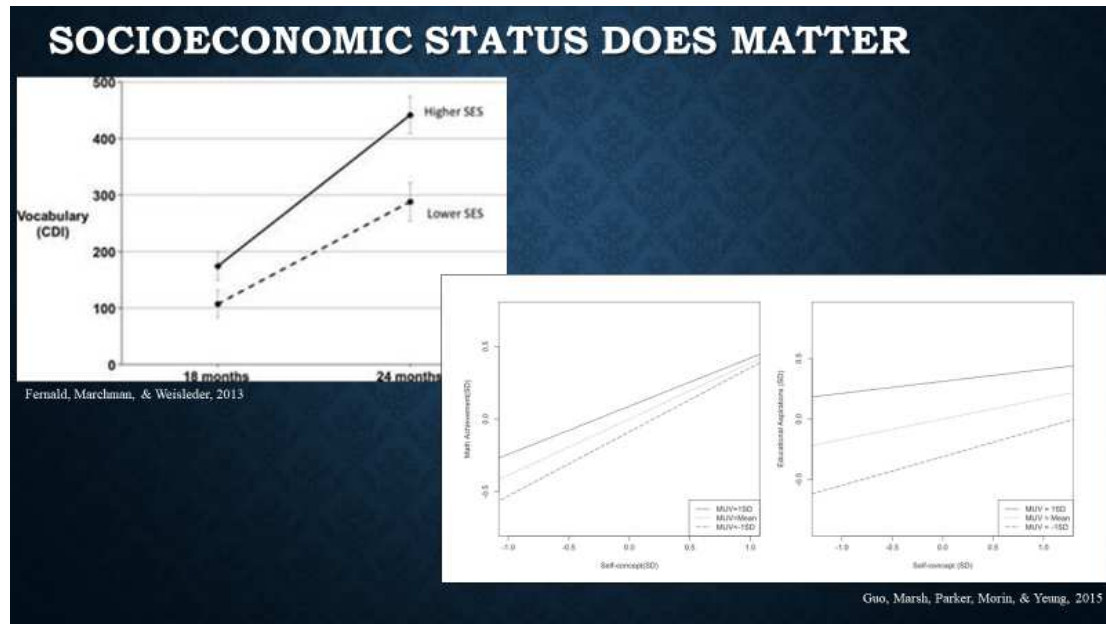
As educators, we should also recognize some of the results of families that live in poverty. As previously discussed, the financial figure used to define poverty is nothing more than a calculation of the average cost across the United States. It is not

necessarily reflective of the local economy. Some families have the opportunity and accept the challenge of working enough jobs to be above this threshold to provide at a higher level for their families. Please recognize that the words “jobs”, as in plural was used. They may have multiple part-time jobs in order to have income. There is also the strong possibility that the time that they work is not conducive for the traditional educational environment. Parent-teacher conferences may be scheduled between 3 and 7 o’clock, which may fall right at the same time as the local factories second shift. Contacting a parent during the typical school day of 8:00 to 4:00 does not work because they are sleeping since they work a midnight shift. Just as importantly, children may be shifted around between families and friends, or required to tend to themselves at younger and younger ages as Latchkey programs are expensive for districts to maintain and staff. These are all alternative results of poverty. Just because a guardian is not present for a conference or returns a phone call or message immediately does not mean that they do not care about their children’s education or behavior. It is prudent for an educator to find out why. It is essential to remember that poverty is a way of life that has effects on everything in their lifestyle.

## **CLASSROOM RIGOR IS REQUIRED**



Just as pedagogy through classroom management sets the stage for student education, classroom rigor is the sustenance that makes the education worthwhile. The frame of a student's educational experience can be structured that they know what to expect, have a firm grasp on the policies and procedures that they must follow, and even understanding of what the next step is for them to be successful in life. All of this is for naught if the knowledge and information that is presented to them is substandard and not equal to their peers.



Regardless of the reasoning, excuses, and supposed justifications as to why our most impoverished children continue to enter their formal education behind their peers. At 18 months of age, a low socioeconomic child's vocabulary is approximately 60% of their higher socioeconomic peers, or a difference of about seventy-five words (Fernald, Marchman, & Weisleder, 2013). By the time they reach 24 months, this difference has roughly doubled to 150 words (Fernald, Marchman, & Weisleder, 2013). It is estimated that by age 3, a child born into poverty will have heard 30 million fewer words than their peers (Fernald, Marchman, & Weisleder, 2013). This lack of vocabulary equates to our most deprived children entering school with a smaller vocabulary than other students.

By no means does this mean that they are not able to learn as fast as their peers, only that their lack of continuous exposure has resulted in them having a smaller repertoire of words to draw upon for understanding and communication. The

same can be stated for mathematics. Some recent standardized test results support the statement that children of poverty are entering high school a year and a half behind their peers in mathematical knowledge and skills (Guo, Marsh, Parker, Morin, & Yeung, 2015).

These students come into the classroom at a distinct disadvantage to their peers, only to see the gap widen through high school. The children that most need the education are being left behind as no original fault of their own. While we push for personal accountability of their education, we forget that they started the race well behind their peers. To expect them to catch up on their own accord is not feasible or realistic without intervention and support of their teachers and administrators.



**COMPASSION  
DOES NOT  
EQUAL  
COMPLACENCY**

As so many educators are not from a poor background or have a real understanding of the topic (Landsman & Lewis, 2011; USDE – NCES, 2017), they

inadvertently lower their standards to be compassionate to these students (EdChange, 2010; Harry & Klinger, 2007; Valencia, 1997). The statement of, “They just do not understand that material” or “Maybe this is just a bit too difficult for them to grasp” has just lowered the bar of expectation for these students and helped to reinforce the idea to them that they are not academically capable compared to their peers. Genuine compassion for students of poverty does not mean complacency through a lowering of standards so that a passing grade is not equal to their peers. These students need to be brought up to where they should be, not the other way around of bringing the standards and expectations down to where you believe it is a better fit. This lowering of standards allows for a false sense of security of the student.

The standards have been created to prepare the student for their future success properly. Standardized testing is not classified by socioeconomic status. They are designed to assess the same standards for all students across the board. As educators, when we expect less out of our poorest students because we mistakenly think that, “This is all they can learn,” we have set them up for failure as adults.



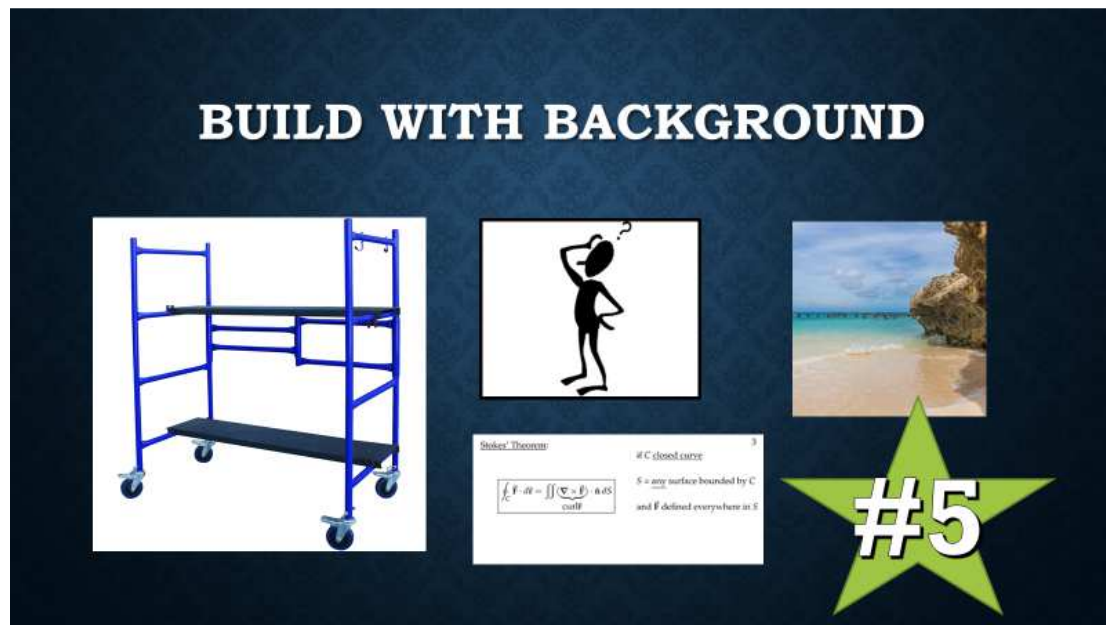
**VOCABULARY BUILDS KNOWLEDGE**

“Have the intestinal fortitude to accept responsibility for what you have spoken and increase your vocabulary to show the depth of knowledge and understanding of the topic you have as compared to your peers.”

Look at this sentence. This response was my reply to a high school senior when they tried to claim that they did not use profanity in the classroom. I had heard it and they quickly recognized what they had said but did not want to admit to it as to not being written up. I was a substitute teacher in the classroom and had never met these students before, nor did I figure that I probably would in the future. This was a Pre-Calculus class and what was proclaimed by the students to be some of the top members of their class. Since this was a large, urban, high-poverty school, I did not doubt this was the case. The student had slipped and did not want to get in trouble.

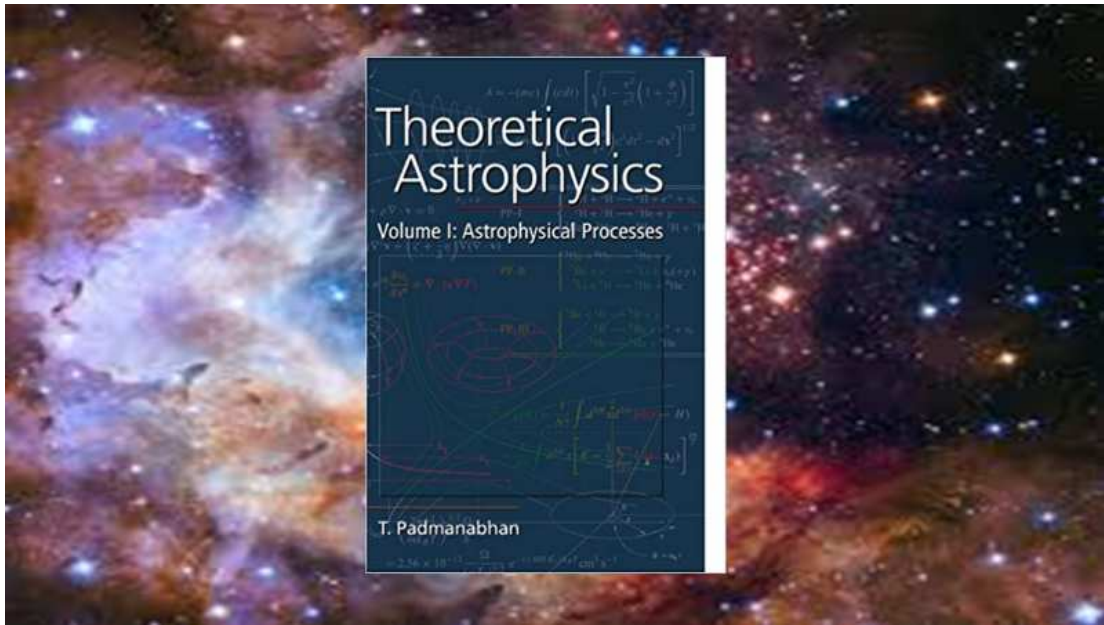
What he did not expect, nor any of the other students, was a response that they did not understand. I had a young lady look at me and said, “That is probably the smartest sentence I have ever heard in my life. Can you write it down and explain it so I can use it?” I wrote it on the board and then led a class of nearly 20 students through each part and what was meant. Why should a substitute teacher be the one

impressing these students? I spoke with most of them about where they were going to college and what majors they were going to pursue. Hopefully, many of these students would break out of the expected mold that comes with poverty. However, why should I be the one to challenge their educational vocabulary? As a teacher, when is the last time that you had a student raise their hand and ask you what a word meant that was not specific to the lesson you are teaching?



As educators, we should all know what the term “scaffolding” is referring to. There will be some non-traditional teachers out there that may not know this term. I have mentored a few along the way. Scaffolding is known by most as a temporary structure built by workers to clean, repair, or build a building. It is used to reach something that is otherwise not attainable and provides a foundation to work from. This idea is reflective of the same concept in education. When students are learning

something new or repairing something that was not sufficiently learned or incorrectly learned the first time, they need a base to work from. This foundation is a fundamental concept for any student in the class but takes on a slightly different approach for our students of poverty. As an educator, it is essential to remember that the background of the students that we teach is quite often different than our own (Chennault, 2010; Landsman & Lewis, 2011; USDE – NCES, 2017; USDE – NCES, 2010). The experiences that would be expected as common are not in the repertoire of these students. Something like an escalator might not be something that the students have experienced in the past since they do not travel outside of the local area. This background knowledge, from personal experiences and what they have been taught in the past, all coalesce together to form the foundation and understanding that a student will use to learn new knowledge. When they do not have something to associate it with because of this established experience, they either attempt to draw from something they have seen before, perhaps a movie or television show, even as inaccurate as they may be, or they just get lost as the lesson progresses forward. This failure to properly process the information presented puts them even further behind in the future.



For example, let us say that you have been enrolled in a Theoretical Astrophysics course because it is the next Science course that is required for you to graduate. Your advisor, or guidance counselor, has said the state says this is what you need in order to have a well-rounded education. How would you do it this course? Who in the room has the background education and knowledge to be successful in this course? I am sure there are a few educators out there that would say it is no problem; there always is. I am speaking to most of the educators out there. The course is a combination of astronomy, chemistry, and physics combined into a single course. Do you have the background knowledge to be successful in a course such as this? Do our students have the understanding and background to build new knowledge from? This lack of knowledge is exacerbated by students of poverty who have commonly not had the opportunity to experience the world outside of their local community.

Their families are not in a financial position to travel or do not have a job that allows for time off for this to occur.

When a parent or guardian is working two or more jobs in order to pay the necessities of life, they typically do not have the opportunity to coordinate the time off to travel. Even if they can, they do not have the money to “squander” on such frivolous activities. It is not that they do not want their children to experience different locations or events, only that food, shelter and clothing take precedence. The next time you are teaching a lesson in the classroom, stop and ask your students who have experienced the event or have been to a location. The answers may surprise you.



College and career ready typically take on a completely different outlook for students of poverty. Current statistics are that only 16% of students of poverty will attain a college degree ((USDE – NCES, 2015)). They explained reasons are

numerous, though probably a combination of them. The solutions have made some improvement, though not a lot compared to the graduation rate of their peers. Students of poverty struggle more in high school and are left to wonder why they should attempt college. The recent surge in the career push has been a breath of fresh air but, these are the environments that our students of poverty can thrive. Junior colleges are typically local, cost less than 4-year schools, have smaller classes, and still lead to the degree that can put the graduate into the workforce immediately. For children of poverty, quicker to work means quicker to having income. Technical colleges allow these students to center in on a future career and enter the workforce with an employable skill. The military provides immediate income, housing, medical, and job training all at the same time. For students of poverty who have been forced to live in the immediate time frame for survival, the sooner than they can find employment and an income, the better. The issue that needs to be reinforced at the high school level is that all of these jobs still require a student to continue learning, even after graduating from high school.



# BUREAU OF LABOR STATISTICS WAGE ESTIMATES, 2017

- Veterinary Technologist and Technicians - \$34,710
- Vehicle and Mobile Equipment Mechanics, Installers, and Repairers - \$44,970
- Small Engine Mechanics - \$38,190
- Heating, Air Conditioning, and Refrigeration Mechanics and Installers - \$49,530
- Chefs and Head Cooks - \$49,650
- Web Developers - \$74,110
- Air Traffic Controllers - \$120,260
- Military E-1 - \$20,169.95 + housing, medical, dental, and food

Just for reference purposes, here is a short list of occupations that require less than two years of schooling after high school graduation. This list is the average pay for a variety of careers that an individual can be with an associate degree, technical certification, or enlisting in the military. How often are these options discussed within the general population of students? Please do not think for a moment that I do not believe every student should have the opportunity to attend a traditional 4-year college. The key word is the opportunity.

High school is not only about knowledge and education but about opportunities. There is a multitude of opportunities available for every student. An unfortunate fact is that often these opportunities are overlooked or not discussed. Presenting a variety of career and professions is not just the job of our counselors as every educator should take the opportunity to talk with their students about opportunities after high school. Students will have some ideas based on their

background, experiences, and personal needs and desires. Consider students of poverty that have been forced to grow up unsure of where their next meal would be, if they would be able to get a good night rest or have to listen to arguing and fighting in the house, or if they would have clean clothes to wear to school. The promise of a good job and a steady paycheck as soon as they are out of high school is quite appealing. Why would it not be after the struggles they were forced to endure as children.



- ▶ Attitude and Perception is Key

- ▶ Standards are Essential

- ▶ Poverty as Life

OVERVIEW

Poverty does not discriminate. It does not care about a child's gender, race, ethnicity, religion, or location. Poverty can strike a family at any time in a thousand different ways. Poverty influences virtually every aspect of a child's life. One thing that poverty fears is education. As an educator, you can make a difference in the lives of these children. In the educational environment that you create, your actions,



thoughts, and beliefs can create the opportunity to help offset some of the effects of poverty. Your attitude and perception of students of poverty help set the stage for their education. A second thought about how a lesson will be viewed by a poor student can help make that slight adjustment to help them understand what is being taught. This adjustment in teaching does not mean that you can lower the standards and expectations in your classroom, only that you need to view the learning from a different lens. Our low socioeconomic students are just as capable of learning as their peers. Their parents, grandparents, siblings, and family want them to succeed just as much as any other family does for their children. It is essential for all stakeholders in the child's education, from the teacher in the classroom to the principal in the hallway to the school board who are responsible for all children, recognize that poverty is a way of life for these children. One that they did not choose but that does affect nearly every single aspect of their life. Every single educator can, and should, make a positive difference in the life of a poor child. The question is, will you?

### Sources

Fernald, A., Marchman, V., & Weisleder, A. (2013, March). SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science*, 16(2), 234-248. doi.org/10.1111/desc.12019

Guo, J., Marsh, H. W., Parker, P. D., Morin, A. J. S., & Young, A. S. (2015, January). Expectancy-value in mathematics, gender and socioeconomic background as predictors of achievement and aspirations: A multi-cohort study. *Learning and Individual Differences*, 37, 161-168. doi.org/10.1016/j.lindif.2015.01.008

Miller, J. (2016, March 24). 5 Ways to make technology more accessible to more students. *TeachThought*. Retrieved from <https://www.teachthought.com/technology/5-ways-make-technology-accessible-students/>

Padmanabhan, T. (2000). *Theoretical astrophysics volume 1: Astrophysical processes*. Cambridge, UK: Cambridge University Press.

Paying for Senior Care. (2018). 2018 Health & human services poverty guidelines/Federal poverty levels. Retrieved from <https://www.payingforseniorcare.com/longtermcare/federal-poverty-level.html>

United States Department of Labor, Bureau of Labor Statistics. (2017). *May 2017 national occupational employment and wage estimates United States*. Washington, DC: USDL – BLS.

### Capstone References

- Adam, E. K., Heissel, J. A., Hittner, E. F., Doleac, J. L., Meer, J., & Figlio. (2017, September). Adolescent cortisol responses to high-stakes testing in school-based settings. *Psychoneuroendocrinology*, 83(supplement), 85.  
doi.org/10.1016/j.psyneuen.2017.07.465
- Alton-Lee, A. (2003). Proceedings from ACER Research Conference 2003: *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis – What role this kind of work can and can't take in building teaching quality?* Camberwell, VIC: Australian Council for Educational Research
- Borman, G. D., & Kimball, S. M. (2005, September). Teacher quality and educational equality: Do teachers with higher standards-based evaluation rating close student achievement gaps? *The Elementary School Journal*, 106(1), 3-20.
- Chandy, L. & Smith, C. (2014, August 26). *How poor at America's poorest? U.S. \$2 a day poverty in a global context*. Washington, DC: The Brookings Institution.
- Chennault, R. E. (2010, Winter). Teaching graduate students about social class: Using a classifying activity with an inductive approach. *Multicultural Education*, 17(2), 56-60.
- Desmond, M. (2012, July). Eviction and the reproduction of urban poverty. *American Journal of Sociology*, 118(1), 88-133. doi.org/10.4135/9781526402059.n7

- Donaldson, R. (2009, August 13). *Adolescent brain development and its effects* [PowerPoint slides]. Retrieved from <https://www.slideshare.net/nationalsafeplace/adolescent-brain-development-and-its-effects>
- EdChange. (2010, December). *Unlearning deficit ideology and the scornful gaze: Thoughts on authenticating the class discourse in education*. Washington, DC: Gorski.
- Fernald, A., Marchman, V., & Weisleder, A. (2013, March). SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science*, 16(2), 234-248. doi.org/10.1111/desc.12019
- Fisher, G. M. (2008). Remembering Mollie Orshansky – The developer of the poverty thresholds. *Social Security Bulletin*, 68(3), 79-83.
- Georgia Department of Public Health. (2017). Online analytical statistical information system. Retrieved from <https://oasis.state.ga.us/oasis/oasis/HealthResourceLocator.aspx>
- Gillespie, A., Best, C., & O'Neill, B. (2012). Cognitive function and assistive technology for cognition: A systematic review. *Journal of the International Neuropsychological Society*, 18(1), 1-19.

- Giordano, A., Mondelli, V., Mehta, M. A., Williams, S., Pariante, C. M., & Dazzan, P. (2018, April). Assessing differences in the inflammatory markers between first episode psychosis patients and healthy controls: The importance of controlling for confounding factors. *Schizophrenia Bulletin*, 44(suppl 1), S118. doi.org/10.1093/schbul/sby016.290
- Gnanendran, V. (2016, May 5). Three years and a lifetime [web log comment]. Retrieved from <https://aidunplugged.wordpress.com/category/violence/>
- Goldhaber, D. (2016, Spring). In schools, teacher quality matters most. *Education Next*, 16(2).
- Gurley, L. (2016, 5 May). Who's afraid of rural poverty? The story behind America's invisible poor. *The American Journal of Economics and Sociology*, 75(3), 589-604. doi.org/10.1111/ajes.12149
- Guo, J., Marsh, H. W., Parker, P. D., Morin, A. J. S., & Yeung, A. S. (2015, January). Expectancy-value in mathematics, gender and socioeconomic background as predictors of achievement and aspirations: A multi-cohort study. *Learning and Individual Differences*, 37, 161-168. doi.org/10.1016/j.lindif.2015.01.008
- Harry, B. & Klingner, J. (2007, February). Discarding the deficit model. *Educational Leadership*, 64(5), 16-21.
- Harvard University. (2018). *Toxic Stress*. Cambridge, MA: Center on the Developing Child
- Henkin, P. (2015). *Chapter 9: The endocrine system* [PowerPoint slides]. Retrieved from <https://slideplayer.com/slide/3448999/>

- Isaksson, J., Lindblad, F., Valladares, E., & Högberg, U. (2015, December). High maternal cortisol levels during pregnancy are associated with more psychiatric symptoms in offspring at age of nine – A prospective study from Nicaragua. *Journal of Psychiatric Research*, 71, 97-102.  
doi.org/10.1016/j.jpsychires.2015.09.016
- Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains and what schools can do about it*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Kenneally, B. A. (Photographer). (n.d.). *Exceptionalism at its best: 21 facts about the explosive growth of poverty in America that will blow your mind*. Retrieved from <https://www.sott.net/article/305537-Exceptionalism-at-its-best-21-facts-about-the-explosive-growth-of-poverty-in-America-that-will-blow-your-mind>
- Kohrt, B., Hruschka, D., Kohrt, H., Carrion, V., Waldman, I., & Worthman, C. (2014, June 3). Child abuse, disruptive behavior disorders, depression, and salivary cortisol levels among institutionalized and community-residing boys in Mongolia. *Asia-Pacific Psychiatry*, 7(1), 7-19. doi.org/10.1111/appy.12141
- Landsman, J., & Lewis, C. (Eds.). (2011). *White teachers/diverse classrooms: Creating inclusive schools, building on students' diversity, and providing true educational equity* (2nd ed.). Sterling, VA: Stylus.

- Laurent, H. K., Gilliam, K. S., Wright, D. B., & Fisher, P. A. (2015). Child anxiety symptoms related to longitudinal cortisol trajectories and acute stress responses: Evidence of developmental stress sensitization. *Journal of Abnormal Psychology, 124*(1), 68-79. <http://dx.doi.org/10.1037/abn0000009>
- Liu, Z. (2015). Map based Atlanta zip code study. Retrieved from <https://www.biggerpockets.com/blogs/6537/44400-map-based-atlanta-zip-code-study>
- Ludwig, J., Duncan, G. J., & Hirschfield, P. (2001, May). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. *Quarterly Journal of Economics, 116*(2), 655-679. [doi.org/10.1162/00335530151144122](https://doi.org/10.1162/00335530151144122)
- Meng, Y., Deng, W., Wang, H., Guo, W., & Li, T. (2015). The prefrontal dysfunction in individuals with Internet gaming disorder: A meta-analysis of functional magnetic resonance imaging studies. *Addiction biology, 20*(4), 799-808.
- Miller, J. (2016, March 24). 5 Ways to make technology more accessible to more students. *TeachThought*. Retrieved from <https://www.teachthought.com/technology/5-ways-make-technology-accessible-students/>
- Minerbi, A., Kahama, R., Goldfeld, L., Kaufman, M., Marom, S., & Ziv, N. (2009, June 23). Long-term relationships between synaptic tenacity, synaptic remodeling, and network activity. *PLoS Biology, 7*(6), e1000136, [doi.org/10.1371/journal.pbio.1000136](https://doi.org/10.1371/journal.pbio.1000136)

Nehmadi, L. (2009, February 9). *The biggest roller coaster drop in the world!!*

[Video file]. Retrieved from

<https://www.youtube.com/watch?v=5aF7dgWvQ6Y>

Oberle, E. & Schonert-Reichl, K. A. (2016, June). Stress contagion in the classroom?

The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30-37.

[doi.org/10.1016/j.socscimed.2016.04.031](https://doi.org/10.1016/j.socscimed.2016.04.031)

Padmanabhan, T. (2000). *Theoretical astrophysics volume I: Astrophysical processes*.

Cambridge, UK: Cambridge University Press.

Patenaude, M. (2015, June 18). Stress in low-income families can affect children's

learning. *University of Rochester Newscenter*. Retrieved from

<http://www.rochester.edu/newscenter/stress-in-low-income-families-can-affect-childrens-learning-108182/>

Paying for Senior Care. (2018). 2018 Health & human services poverty

guidelines/Federal poverty levels. Retrieved from

<https://www.payingforseniorcare.com/longtermcare/federal-poverty-level.html>

Reeves, R., Rodrigue, E., & Kneebone, E. (2016). *Five evils:*

*Multidimensional poverty and race in America*. Washington, DC: The Brookings Institute.



- Sharkey, P., & Elwert, F. (2001, May). The legacy of disadvantage: Multigenerational neighborhood effects on cognitive ability. *American Journal of Sociology*, 116(6), 1934-1981. doi.org/10.1086/660009
- Smith, L. (2018, February 8). Here's how much Americans have in their savings accounts. *Business Insider*.
- Tene, O., Halleivi, H., Korczyn, A. D., Shopin, L., Molad, J., Kirschbaum, C., Bornstein, N. M., Shenhar-Tsarfaty, S., Kliper, E., Auriel, E., Usher, S., Stalder, T., & Assayag, E. B. (2018, August 23). The price of stress: High bedtime salivary cortisol levels are associated with brain atrophy and cognitive decline in stroke survivors. Results from the TABASCO prospective cohort study. *Journal of Alzheimer's Disease*, 1-11. doi.org/10.3233/jad-180486
- Townsend, P. (1979). *Poverty in the United Kingdom*. London, UK: Allen Lane and Penguin Books.
- United States Bureau of Labor Statistics. (2018). *Earning and unemployment rates by educational attainment, 2017*. Washington, DC: Office of Occupational Statistics and Employment Projections.
- United States Department of Agriculture. (2017, February). *Official USDA food plans: Cost of food at home at four levels, U.S. average, January 2017* [Data file]. Retrieved from <https://www.cnpp.usda.gov/sites/default/files/CostofFoodJan2017.pdf>

United States Department of Agriculture, Economic Research Services (USDA-ERS).

(2018). *Rural poverty & well-being*. Washington, DC: USDA-ERS.

United States Department of Commerce, Bureau of Economic Analysis. (2018a). *CAI*

*personal income summary: Personal income, population, per capita personal income* [Data file]. Retrieved from

<https://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&acrdn=7#reqid=70&step=30&isuri=1&7022=20&7023=7&7033=-1&7024=non-industry&7025=4&7026=xx&7027=2016&7001=720&7028=3&7031=xx&7040=-1&7083=levels&7029=20&7090=70>

United States Department of Commerce, United States Census Bureau. (2018b).

*Small area income and poverty estimates (SAIPE)*. Retrieved from

[https://www.census.gov/data-tools/demo/saife/saife.html?s\\_appName=saife&map\\_yearSelector=2016&map\\_geoSelector=aa\\_c](https://www.census.gov/data-tools/demo/saife/saife.html?s_appName=saife&map_yearSelector=2016&map_geoSelector=aa_c)

United States Department of Commerce. (2018c, November). *Table 1. Per capita*

*personal income by county, 2015-2017* [Data set]. Retrieved from

<https://www.bea.gov/data/income-saving/personal-income-county-metro-and-other-areas>.

United States Department of Commerce, United States Census Bureau. (2016). *DP03*

*Selected economic characteristics – 2006-2010 American community survey*

*5-year estimates* [Data file]. Retrieved from

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

United States Department of Commerce, United State Census Bureau. (2010). *DP-1*

*Profile of general population and housing characteristics: 2010 demographic*

*profile data* [Data file]. Retrieved from

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

United States Department of Education, National Center for Education Statistics

(USDE-NCES). (2018, May). *Characteristics of Children's Families*.

Washington, DC: USDE – NCES.

United States Department of Education, National Center for Education Statistics

(USDE – NCES). (2017). *Digest of education statistics, 2017*. Washington,

DC: USDE – NCES.

United States Department of Education, National Center for Education Statistics

(USDE – NCES). (2015). *The Condition of Education 2015*. Washington, DC:

USDE – NCES.

United States Department of Education, National Center for Education Statistics

(USDE – NCES). (2013). *Digest of education statistics, 2012*. Washington,

DC: USDE – NCES.

- United States Department of Education, National Center for Education Statistics  
(USDE – NCES). (2010). *Digest of education statistics, 2010*. Washington, DC: USDE – NCES.
- United States Department of Labor, Bureau of Labor Statistics. (2017). *May 2017 national occupational employment and wage estimates United States*. Washington, DC: USDL – BLS.
- Valencia, R. R. (1997). *The evolution of deficit thinking: Educational thought and practice. The Stanford series on education and public policy*. Bristol, PA: Falmer Press.
- Vliegthart, J., Noppe, G., van Rossum, E. F. C., Koper, J. W., Raat, H., & van der Akker, E. L. T. (2016, March). Socioeconomic status in children is associated with hair cortisol levels as a biological measure of chronic stress. *Psychoneuroendocrinology*, 65, 9-14.  
doi.org/10.1016/j.psyneuen.2015.11.022
- West, R. (2015). *Adrenal fatigue and other hormones* [PowerPoint slides]. Retrieved from <http://slideplayer.com/slide/3393499/>
- World Bank. (2016). *Poverty and shared prosperity 2016: Taking on inequality*. Washington, DC: World Bank.
- Wu, F., Webster, C., He, S., & Liu, Y. (2010). *Urban poverty in China*. Northampton, MA: Edward Elgar Publishing, Inc.

Zimmerman, B. (2014, September 9). Ravaged by stress? Tips on how to reduce cortisol. [web log comment]. Retrieved from <http://beyondgoodhealthclinics.com.au/how-to-reduce-cortisol/>

## VITA

BRADFORD R. STEPHENS

EDUCATION

June, 2012	Bachelor of General Studies Indiana University Bloomington, Indiana
May, 2016	Master of Education University of Arkansas at Little Rock Little Rock, Arkansas
June, 2018	Education Specialist Morehead State University Morehead, Kentucky
Pending	Doctor of Education Morehead State University Morehead, Kentucky

PROFESSIONAL EXPERIENCES

March, 2019 to Present	Teacher Academics Plus Charter School Scott, Arkansas
January, 2019 to February, 2019	Substitute Teacher WillSub (PCMI) Portland, Michigan
August, 2017 to July, 2018	Teacher Hope Public School District Hope, Arkansas
August, 2014 to July, 2017	Teacher England Public School District England, Arkansas

January, 2014 to June, 2017	Instructor/Tutor Upward Bound Program Arkansas State University - Beebe Beebe, Arkansas
September, 2013 to July, 2014	Teacher Jacksonville Lighthouse Charter School Jacksonville, Arkansas
March, 2012 to July, 2013	Executive Administrative Assistant United States Army Camp Phoenix/Camp Sabula-Harrison, Afghanistan
October, 2006 to March, 2012	Simulation Facility Logistical Manager Indiana Army National Guard Edinburgh, Indiana